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ABSTRACT

The primary purpose of this project was to stimulate individuals and institutions to conduct short-term teacher education activities for persons in the health occupations field. Because this program has been growing rapidly, teacher education activities have not kept up with the expansion. An institute, consisting of 85 participants, six staff members, and 13 consultants, included: general presentations, panel discussions, small group discussions, micro-experiences and informal activities. As a result of the institute, a publication of the guidelines and general presentations was compiled (Volume II of this final report, available as ED 037 581) and a model inservice teacher education course on classroom testing was developed. Based on pre- and posttests, an evaluation of modular units, and a 1-year followup, the program was judged a success. Recommendations call for continuing efforts to be directed toward the teacher education needs of those in health occupations education. (Author/GEB)

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DEVELOPING TEACHING COMPETENCIES NEEDED BY EDUCATIONAL PERSONNEL IN POST-SECONDARY HEALTH OCCUPATIONS PROGRAMS

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August 1971

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Finally, to the institute participants and those who participated in the supplementary activities associated with this project, a sincere thanks.

LDH
LJB

SUMMARY

Grant Number: OEG-0-9-250340-4138(725)

Title: Developing Teaching Competencies Needed by Educational Personnel in Post-Secondary Health Occupations Programs

Project Director: Lewis D. Holloway, Associate Professor
Health Occupations Education

Duration: April 15, 1969 - January 15, 1971

Purpose and Objective

Although health occupations education is the fastest growing vocational and technical field, teacher education activities for this field have not kept up with the rapid expansion of programs. This project was designed to attack this problem. Since most new teachers entering health occupations education programs are not required to have had extensive pre-service teacher education experiences, it was decided the project should concentrate on short-term teacher education activities.

The primary purpose of the project was to stimulate individuals and institutions to conduct short-term teacher education activities. The overall objective was to improve the teaching-learning process in programs preparing health care workers.

Activities

The major activity of this project was an institute which brought together 85 participants, six staff members and 13 consultants from across the country. It was proposed that as a result of their institute experience the participants would conduct, or stimulate others to conduct, short-term teacher education activities. The activities of the institute were based upon guidelines for planning and conducting short-term teacher education activities which the staff developed. The two-week institute, August 18-29, 1969, included a wide variety of activities including: general presentations, panel discussions, small group discussions, micro-experiences and many informal activities. A relatively high degree of group identity was established. In addition to discussion sessions in which the participants were grouped either homogeneously by specialty areas, or heterogeneously to provide a mixture of specialties, they also met in implementation groups where they began planning how they would put teacher education activities into practice.

Following the institute the guidelines were appropriately revised and the general presentations were edited and prepared as supportive papers. A publication entitled "Guidelines and Supportive Papers for Planning and Conducting Short-Term Teacher Education Activities" was printed and widely distributed.

A third activity was the development of a model in-service teacher education course on classroom testing which included "live" and "packaged" lessons. The in-service program was administered three times using modified formats and materials. The course materials are being made available to interested parties at cost.

Evaluation

An extensive evaluation of the institute was conducted. This included pre- and post-assessments, an evaluation of each modular unit during the institute, and a one year follow-up of the institute. The extent to which the "Guidelines" publication was used was assessed by means of a questionnaire distributed to all who received the document. A questionnaire-opinionnaire was the major assessment tool for the in-service teacher education program.

Conclusions

The institute was judged a success on the basis of both the on-going and follow-up assessments. The results of the evaluations revealed that participants did change their behavior on the basis of institute participation and there were a great many teacher education activities conducted which could be attributed to the institute.

Analysis of the data returned on the use of the "Guidelines" publication indicate that it was well received and that it is being used extensively in teacher-education activities. The model in-service teacher education course on classroom testing has proven quite successful.

Based upon the results of the evaluations of the three activities it is concluded that this project has had a profound effect upon teacher education in the health occupations education field.

RECOMMENDATIONS

A variety of recommendations were made on the basis of the activities of this project. In general, they call for continuing efforts to be directed toward meeting the teacher education needs of those in health occupations education.

I. INTRODUCTION

PROBLEM

Throughout the nation there continues to be a shortage of qualified personnel to care for the sick in hospitals, nursing homes, clinics, doctors' offices and other health agencies. An increasing population, the enactment of health care legislation, and a growing awareness of the need for more and better health care available to all, has caused increasing demands for workers in the health careers. In addition, patterns of health care are changing rapidly in our country. Autonomous health workers, the dentist and physician, are increasing their utilization of supportive personnel so that they may use their time and talents more efficiently while serving greater numbers of people. As a result, health occupations education has become one of the fastest growing areas of education.

There is a lack of prepared instruction-personnel available to staff the increasing number of programs for supportive health workers which are being developed in hospitals, area vocational-technical schools, community colleges and universities. Technically competent instructional staff members must come from the ranks of those presently prepared in the health field. Although such individuals are well prepared and experienced in their technical specialties, they have not been prepared as teachers. If these teachers are to maximize learning in the activities for which they are responsible they need assistance in gaining the necessary teaching competencies before beginning, or early in, their teaching career. In most instances, the only acquaintance with the teaching process that such instructors have is from their own experiences as a student. These experiences were often in a higher-level program and may be inappropriate for the group being taught. Also, such experiences may have failed to include many of the more modern and innovative learning strategies.

It would be ideal if new health occupations education instructors could receive an extensive in-depth preparation for their role as teachers before being expected to plan educational programs and to meet classes. Presently, few programs of this type are available. Persons prepared in the health field are also often reluctant to become involved in extensive training at their own expense when they can remain in their area of specialization at a salary equivalent to, or near, that of a faculty member. Consequently, in most instances the health specialist enters teaching without further specific preparation. In light of these conditions, alternative approaches must be developed to meet the immediate and widespread needs of health occupations education teachers.

PURPOSE

Improving the quantity and quality of health care services is the ultimate measure of success of programs preparing health workers at all educational levels. The activities conducted under this project were designed to contribute to this goal by improving the teaching-learning processes in educational programs preparing health workers.

OBJECTIVES

Educational objectives were utilized extensively in all phases of this project. A hierarchical approach to the writing of educational objectives, as is described in one of the supportive papers in Volume II, was used throughout the activities. With such a format, an overall educational objective is specified and a series of objectives are written in a manner similar to an outline. These objectives form a continuum from the general to the specific. The objectives presented in this section will be those for the entire project. The reader is directed to Volume II for the educational objectives which were developed as a part of each modular unit of the guidelines for short-term teacher education activities.

As this project was composed of three major activities: (1) a national institute on short-term teacher education for health occupations education personnel, (2) the publication of guidelines and supportive papers for short-term teacher education activities, and (3) the development of an exemplary in-service teacher education course. The objectives are presented separately for each of these three activities.

THE INSTITUTE

As a result of participation in this institute persons presently engaged in, or responsible for, providing consultant leadership in teacher education activities for health occupations education personnel will extend and improve their teacher education competencies.

Following completion of the institute each participant will be able to:

1. obtain, interpret and relate national, regional and local health manpower requirements to the planning and operation of local programs;

2. demonstrate an acquaintance with emerging and innovative approaches and techniques for providing health care services and develop guidelines for introducing such approaches into educational programs and health care agencies;

3. identify the role of the health specialist as a teacher;

4. demonstrate competency in writing and using educational objectives;

5. relate knowledge of the process of learning, individual differences and problems of the disadvantaged to practical applications in working with students;

6. identify acceptable criteria and levels of performance for use in selecting students;

7. identify instructional strategies which are appropriate for the educational objectives established;

8. demonstrate competency in curriculum planning which reflects exemplary practices in the field of education;

9. develop structures and procedures for operating quality educational programs utilizing such approaches as core curriculum, career ladder, differentiated staffing, and mediated self-instruction;

10. recognize the need for evaluation to be an integral part of the educational process and prepare valid classroom tests;

11. produce and use common types of instructional media;

12. critically evaluate classroom presentations made by teacher trainees;

13. identify ways in which the quality of programs can be improved through use of total health resources of the community, e.g., advisory committees, consulting and part-time faculty members, and clinical agencies; and,

14. outline the administrative structure necessary to operate short-term teacher education activities and conduct such programs.

THE GUIDELINES PUBLICATION

To improve teaching competencies through a model teacher education program for health occupations education personnel the project staff will:

1. produce and disseminate a publication entitled "Guidelines and Supportive Papers for Planning and Conducting Short-Term Teacher Education Activities for Health Occupations Education Personnel";

2. survey individuals receiving the publication as to its use and solicit their critical comments; and,

3. report the results of the survey in the final report of the project.

THE IN-SERVICE TEACHER EDUCATION COURSE*

To demonstrate the development of an in-service teacher education activity based on the "Guidelines and Supportive Papers" publication. The project staff will:

1. interview health occupations education personnel as to their in-service education priorities;

2. plan an exemplary in-service teacher education activity;

3. produce an in-service teacher education program;

4. conduct an in-service teacher education program;

5. evaluate the in-service teacher education program;

6. disseminate information and materials on the exemplary program; and,

7. utilize the program materials developed for further in-service teacher education activities.

*These objectives and the activities conducted pursuant to them were not a part of the original proposal for this project. They were approved for inclusion by an amendment to the original grant.

PROJECT ACTIVITIES

THE INSTITUTE

As indicated earlier, it is not realistic to expect new teachers in the health occupations education field to be fully prepared for their role as teachers before they begin planning and conducting classes. An alternative method for gaining teaching competencies is the use of short-term institutes, workshops or conferences for new or experienced teachers. A number of activities of this type have been held on national, regional, state and local levels. The offerings to date have been inadequate to meet the needs of health occupations education personnel.

The purpose of the institute held at the University of Iowa in August of 1969, entitled "Developing Teaching Competencies Needed By Educational Personnel in Post-Secondary Health Occupations Programs," was to bring together participants from across the nation to take part in a model short-term teacher education activity. Each participant would then in turn, be able to implement, or stimulate and promote, teacher education activities in their state, region or health specialty field. Prior to the arrival of the participants, guidelines and supportive materials were developed. The guidelines, the supportive materials and the papers given by the instructional staff and the consultant-presenters during the institute make up Volume II of this final report. Institute participants had an opportunity to become acquainted with the guidelines; to participate in activities which might be exemplary of how the guidelines could be utilized; and were encouraged to make plans regarding what they would do upon their return home, and how this might be done. In addition to the specific objectives previously listed, a great deal of effort was expended to develop a positive attitude toward short-term teacher education activities and to generate a group spirit which would facilitate the participants' involvement, both during and following the institute. An extensive evaluation was conducted to ascertain the extent to which the institute objectives were achieved.

THE GUIDELINES PUBLICATION

The planning activities for the institute included the development of guidelines for planning and conducting short-term teacher education activities. The guidelines were composed of six modular units. Each unit included: educational objectives, instructional strategies, annotated bibliography and supplementary materials for the particular topic area. These materials were distributed to the institute participants prior to beginning the learning activities related to each individual modular unit. Following the institute the guidelines were revised based on feedback from the instructional staff and the participants. Additionally, the presentations made by the instructional staff and the consultant-presenters were tape-recorded, transcribed, edited, and retyped. All of these materials were bound together and a document was published entitled Guidelines and Supportive Papers for Planning and Conducting Short-Term Teacher Education Activities. This publication, which becomes Part II of the final report, was distributed to the institute staff and participants, and to approximately six hundred individuals across the nation who were identified as prospective users, or who learned of its existence and requested a copy. A questionnaire was sent to each of the recipients of the publication and the analysis of this data is included in this report.

THE IN-SERVICE TEACHER EDUCATION COURSE

Following the institute it was felt that it would be within the scope of this project to develop and conduct an exemplary in-service teacher education activity. Therefore, the U. S. Office of Education was contacted and the project was so amended. A survey form was developed to ascertain the teacher education needs of health occupations education instructional personnel. This instrument was administered to the health occupations education personnel in two of Iowa's community colleges and the data were analyzed. It was decided that the in-service teacher education course to be developed would be in the area of student evaluation, or classroom testing. The course was developed to include both "packaged" and "live" activities and was administered in one of the afore-mentioned community colleges. Additionally, the course was also piloted during a two-week workshop which the project director conducted at the University of Georgia, and at another community college in Iowa. The activity was evaluated and the results are included in this document. The materials developed for the course, which might well be of value to others interested in this type of activity, are available at cost from the project director.

II. INSTITUTE PLANNING

THE INSTRUCTIONAL PROGRAM

General planning for the institute was done concurrent with preparation of the project proposal. With only minor modifications the institute activities followed the design prescribed in the proposal. All individuals who had been identified in the proposal as potential staff members followed through in their commitment to the institute. More detailed planning activities began following funding of the project.

It was decided that the guidelines for conducting short-term teacher education activities should be developed in "modular units." The institute procedures were designed to involve participants in activities similar to those described in the guidelines and to solicit their reactions to both the guidelines and the activities.

As a starting point, the original fourteen objectives for the institute were organized into six modular units. On May 9 and 10, 1969 the six member institute staff gathered in Iowa City for a planning meeting. The staff members, and the consultant-presenters who assisted with the institute, are identified in Appendix A. Since the group, individually and collectively, possessed considerable experience in conducting similar types of institutes there was no lack of input regarding content, strategies and general approaches which might be used. The modular units were analyzed and systematically revised to arrive at homogeneous units. The staff also determined the amount of time which should be allocated to the various units and the topics within these units. There was general agreement that the institute format should actively involve participants in the learning process. Various alternatives were examined for individual, small group and large group activities.

The staff explored at depth the question of what specific content and materials should be included in the guidelines. It was decided that each modular unit should contain the educational objectives for that unit, suggested instructional strategies for achieving the objectives,an annotated bibliography and appropriate supplemental materials.

Concern was expressed that the institute be conducted in an orderly fashion, but that considerable flexibility be "built in" so that specific needs of participants could be met. One effort designed to encourage feedback from participants was the creation of an advisory committee composed of participants.

Although several of the six staff members had been previously acquainted, including working cooperatively on other institutes, the planning session provided them with an opportunity to get to know one another better before the institute. All agreed that these were two very stimulating and productive days.

As might be expected, there was a tendency to identify many more topic areas than could be covered within the proposed guidelines and during the two-week institute. The planning session provided an opportunity for brain-storming and allowed for a free flow and exchange of ideas. It is important to note that the learning processes were given as much consideration as the content areas, a factor which may have had considerable affect upon the outcomes of the institute. At this time the staff also finalized the involvement of several consultant-presenters.

Following the planning session the project director began more detailed planning for the institute. Many ideas and information had to be summarized, organized and put into a workable plan. As the agenda was formalized and the modular units were further refined they were sent to the staff members for their reactions.

In early June the assistant director came to The University of Iowa to spend three months working full-time on the project. In addition to assisting the director in all aspects of the project, his primary responsibilities were for the on-going evaluation of the institute, developing the annotated bibliographies for the modular units, and organizing a "Learning Resource Center"for the institute.

Ancilarry to the institute a "Learning Resource Center" was established to acquaint the prospective teacher educators with current instructional media. Twenty-three book and material publishers were contacted and asked to provide descriptive materials and copies of publications relevant to the domain of teacher education in such areas as: curriculum development, instructional strategies, administration and supervision, and evaluation. Response from the publishers was most gratifying as they provided many books, catalogs and other types of instructional materials to display.

During the pre-institute planning period the objectives for each modular unit were continuously revised and detailed. From materials which the staff had identified as being of particular significance, and from the materials received from the publishers, an annotated bibliography was compiled for each of the modular units. Suggested instructional strategies were planned for each modular unit based on the activities being developed for the institute and their appropriateness for the objectives.

It was considered desirable to send the participants materials prior to the institute so that they might obtain some familiarity with the background content of the modular units and the activities which were planned for the institute. Due to the time required to prepare the guidelines and other materials for the institute, however, no such mailing was made to them prior to the institute. However, the publication entitled Constructing Achievement Test by Norman E. Gronlund did not arrive until a few days before the institute was to begin. The other publication Developing Attitude Toward Learning, by Robert F. Mager was sent to the participants three weeks prior to the institute. It was anticipated that after reading this publication the participants would approach the institute with a more positive "set" for the topics to be covered. There were many positive comments regarding the publication and it was referred to at various points during the institute. The book on achievement testing was distributed during the institute and served as a reference for the unit on evaluation.

SELECTION OF PARTICIPANTS

INFORMATION DISSEMINATION

Delays in finalizing the funding of the project did not allow sufficient time for information to be adequately disseminated before the institute. Since the lateness in funding was anticipated, the project director had an institute brochure already prepared. Upon receiving official approval the brochure was printed. The information which was included in the brochure is shown in Appendix B. Since the final report will not be printed in color, the cover sheet with an attractive picture of the Old Capitol Building at The University of Iowa has not been included. The application form which was prepared is shown in Appendix B.

It was not intended that the application would be included with the initial mailing so the brochure included a tear-off request for those individuals wishing to receive applications. Due to the time limitation, the application forms were distributed with the brochures. Over 1,000 brochures were distributed in the initial mailing. In some cases, e.g., the supervisors of health occupations education for each state, multiple brochures were included with each mailing. In addition, brochures were sent to: supervisors of health occupations education in each of the U. S. Office of Education's regional offices; coordinators and directors of Regional Medical Programs; participants at the first annual meeting of the Association of Schools of Allied Health Professions; directors of Research Coordinating Units in each state; and to many individuals and agencies who are on mailing lists which have been compiled by the Program in Health Occupations Education.

In addition to the "broadspread" mailing of brochures and applications, letters were sent to several journals and newsletters relating to health occupations education and to allied health, requesting that they announce the institute in their publications. From the initial mailings, the announcements in publications, from additional requests for brochures and from the word being informally circulated by prospective participants began to apply. By the June 13, 1969 deadline over 100 applications had been received.

THE SELECTION PROCESS

As can be seen in the section of the brochure (Appendix B) entitled "Participant Selection," the top priority was given to those who could substantiate by their position, experience, preparation, interest, or otherwise that following their participation in the institute they would be able to make a significant contribution to teacher education for health occupations education. Additionally, priority was given to applicants who were members of a team, of from two to four from a given state or region, who would work together to implement short-term teacher education activities. Consideration in the selection process was also accorded to participants who represented a wide variety of health specialties and to factors such as geographical location and population density.

As applications were received, selected pertinent data was recorded on the top of each application which allowed rapid review of the information contained therein. This included: (1) position held; (2) type of institution; (3) specialty background or relationship to the health field; (4) identification with a team applying to the institute; and, (5) the state in which employed. The applications were grouped and regrouped in an effort to ascertain which applicants best represented the priorities. From the over 100 applications it was decided to initially accept 95 participants. The remaining five stipended positions were held open for a few late registrants who made telephone contact, or who had requested brochures and asked for a time extension.

On June 25, 1969 a letter was sent notifying those individuals who had been accepted. Additional information related to the institute was also provided. A form was enclosed on which to specify whether they would be attending the institute and if they wished to receive the $75.00 per week subsistence stipend. Information was also included regarding housing options. The first option was for the participant to stay at the Iowa House which is attached to the Iowa Memorial Union where the institute activities were to take place. A motel located approximately two miles west of the Iowa Memorial Union was the second option. Room rates which had been arranged were specified for each option. A third alternative was for the participant to make his own housing arrangements. Each participant was asked to sign and return the form to the project director. Also enclosed with this mailing was a list of the 95 individuals who had been accepted. It was suggested that those from the same state or region might wish to become acquainted or make contact before their arrival. These forms were to be returned no later than July 11, 1969.

On July 14, 1969 those who had returned the acceptance and housing form were sent confirmation of their housing request and a memo stating that they would receive a packet of information from The University of Iowa business office regarding transportation expenses. Participants were asked to bring curricular materials which they might share with other participants and/or use in the curricular development activities of the institute. They were also informed of possible recreational activities so that they might bring appropriate attire. Additionally, it was indicated that they would be receiving a brief survey questionnaire and rating scale to be completed before the institute.

A relatively large number of those who had been accepted did not return their acceptance form by the July 11, 1969 deadline. On July 16, these individuals were sent a follow-up letter which included a second copy of the acceptance letter and the housing form. It was requested that the forms be completed and returned immediately.

When the original group of participants were selected, those who had not been chosen were sent a letter of regret. They were informed that it could be expected that some of those who had been accepted would not be able to attend and they were asked whether they wished to be considered as alternates. Several of these applicants returned the forms indicating that they did wish to be alternates.

Of the original 95 applicants who were accepted for the institute, 27 became "fall outs" and did not attend the institute. Many of the "fall outs" had returned acceptance forms indicating they would be attending, received the mailings, and completed the initial pre-institute evaluation materials. This situation caused many problems and considerable frustration on the part of the staff. Some of the problem may be attributed to the short time sequence caused by the late funding. There were numerous communication problems, some of which resulted because individuals were on summer vacation. Also, many of the individuals became ill or had other emergencies just prior to the institute. As "fall outs" were identified, substitutions were made from the alternates and from applications received after the initial selection had been completed. This involved a great deal of correspondence and many telephone calls. A total of 85 individuals attended the institute as full participants, three of whom did not receive stipends. Priority was given to those who could show the possibility of their conducting or stimulating others to conduct, short-term teacher education activities but several teachers from various health specialty programs were also selected to provide input from the "grass roots" level of health occupations education. Several others, most of whom were from The University of Iowa, attended various sessions as guests. A list of participants can be found in Appendix C.

GENERAL ORGANIZATION AND MANAGEMENT

Planning an institute of this nature and scope requires a great deal of time and involves many varied activities. To assist with the planning stage and in the actual conduct of the institute, arrangements were made with The University of Iowa Center for Conferences and Institutes. This included assistance with registration, procuring meeting rooms, meal functions, coffee service, bussing and the fiscal arrangements. It was anticipated that this unit would handle most of the correspondence with the participants once they had been accepted, but due to communication problems and the "fall outs" this was difficult to arrange.

Cooperative arrangements were made with the College of Education of The University of Iowa to offer course credit for participation in the institute. On the first day of the institute those wishing to do so registered and paid a $40.00 fee for the two semester hours of undergraduate or graduate credit.

A major problem developed shortly before the institute was to begin regarding the food service. Participants and staff had been informed that those residing in the Iowa House would have meals readily available at all times, and that everyone could have their noon meal at the Iowa Memorial Union. Due to the particular time of year chosen for the institute, all food services within the Iowa Memorial Union were closed. It became necessary, therefore, to provide some type of alternative food service. The Center for Conferences and Institutes was able to arrange for meal service at a local athletic club to which the participants were bussed for the noon meal. For the other meals participants were on their own to eat at restaurants in Iowa City. After the first few days, participants and staff chose to drop the scheduled noon meal service and make their own arrangements for all meals.

III. INSTITUTE ACTIVITIES

THE FORMAT

This section describes the general format and procedures for the institute. A later section will describe activities related to each modular unit. The reader may wish to refer to the agenda (Appendix D) as is appropriate. The agenda is a modified version of the one distributed to the participants since it reflects changes which were made as the program progressed.

At the time of registration each individual was provided a name badge; an agenda; a list of participants; and a packet of materials containing a pen, descriptive brochures and maps. Thirty-five of the participants registered for course credit at this time. Coffee and doughnuts were available and the participants began mixing and getting acquainted, or renewing friendships.

The first formal meeting began at 9:00 A.M. on Monday, August 18, 1969. The participants were welcomed by the project director who explained how this institute was "born." It started with an idea in the U. S. Office of Education. This was followed by conception in the form of a proposal; then an incubation period, waiting for funding; a period of detailed planning; and finally, as the institute began, its birth. It was suggested, by the director, that within two short weeks the institute would go through all of the life stages: the faltering steps of childhood, the trying period of adolescence, the questioning period of young adulthood, the highly productive years of maturity, an even the discomforts of old age. The participants were challenged to continue the analogy to the birth and life processes by setting into motion a "teacher education explosion."

The University of Iowa was acknowledged at this time for its strong support of activities aimed at improving health care in the State and throughout the nation. Vice-Provost for Health Affairs, Dr. Robert C. Hardin, was unable to meet with the group, but was recognized for his continued support of activities of this nature.

Since the institute was being conducted as an on-going activity of the Program in Health Occupations Education the director of that program, Miss Elizabeth E. Kerr, was asked to welcome the participants. Miss Kerr, a leader in the field of health occupations education, described the Program in Health Occupations Education and how its unique structure had allowed for the rapid expansion of quality programs throughout the State of Iowa. Many questions were raised by the participants as they became involved in this welcome, an action which was exemplary of the type of free-flowing open discussion which was to follow.

Dr. Howard Jones, Dean of the College of Education, The University of Iowa, greeted the participants on behalf of his college. Mr. O. A. Brunsvold, Associate Superintendent, Career Education Branch, State Department of Public Instruction also welcomed the participants. Finally, Miss Helen Powers welcomed the participants on behalf of the U. S. Office of Education. Miss Powers, who is responsible for health occupations education activities at the federal level, had been involved in the planning that generated the proposal request which culminated in the institute. She indicated her pleasure with the group assembled and with the prospects for implementing teacher education activities throughout the country.

Following the welcoming activities the project director reported on materials which the participants were to have received, specific problems which had occurred, and plans for meals and special activities. Although it is not indicated on the agenda, there were routine business tasks of this nature which were handled daily. At this point each of the other five staff members were introduced. The program was then turned over to Jacob Stern who discussed the objectives of the institute. He presented an overview of the institute in terms of how the program would be conducted, the types of behaviors the participants might be expected to achieve, and in general set the tone for the activities which followed.

The remaining two weeks of the institute included general presentations, several types of small group sessions, individual activities, micro-experiences and many informal contacts among the participants and staff. General sessions were held in a large auditorium-style room, and were usually led by a specific presenter. Considerable effort was made to establish rapport with the participants and to utilize instructional strategies that would involve the learners as much as possible. Therefore, the actual conduct of the general sessions represented a continuum from teacher-centered lectures to learner-centered discussions.

Small group sessions were used extensively to insure involvement of the participants. During the week-end prior to the institute, staff members selected participants for the various small groups. It was considered desirable that the participants be grouped according to their specialty interest areas for some small group activities while for others it was felt that learning would best be facilitated by heterogeneous grouping. Therefore, a matrix was developed which had five divisions in each direction. One direction, from A to E, was designated Specialty Interest Groups (SIG) and the other, from 1 to 5, General Interest Groups (GIG). Having agreed upon a limit of five groups, it was not possible to form all of the possible Specialty Interest Groups. Group A was composed mostly of individuals from the medical laboratory area and radiological technologists. Included in Group B were individuals who were in primarily administrative positions, most of whom did not have a health specialty background. Group C was primarily individuals who served as supervisors of health occupations education in state departments of education. A diverse mixture of health specialty and non-health specialty individuals made up Group D, including inhalation therapists, physical therapists and dietitians. Group E was composed of nurses who were in positions other than administrative. Two physicians and several other special cases were scattered throughout the groups. The matrix allowed for five randomly selected General Interest Groups which had approximately equal representation from each of the Specialty Interest Groups.

A staff member was designated to work with each Specialty Interest Group and each General Interest Group. As the institute progressed and the participants moved into specific planning for their micro-experiences, the Specialty Interest Groups were sub-divided into Task Groups (TG).

As indicated earlier, priority was given to participants who had identified that they were members of a team from a given state or region. It was considered helpful to have more than a single individual involved when attempting to implement programs. To give the "strength in numbers" concept further impetus an additional small group structure was developed. The Implementation Groups (IG) were organized on a state-wide or regional basis. These groups were given the charge to discuss the need for teacher education activities, existing services, types of activities which they might appropriately stimulate or conduct and how they would put their plans into action. Near the end of the institute the Implementation Groups were asked to report their plans to the total group. There was considerable variation in the degree to which these groups met their charge. It has been particularly rewarding to see that several groups have followed through with their planning. Several of the teacher education activities reported later in this document were a direct result of these small group activities.

Advisory committee-staff meetings began on Tuesday of the first week and were held periodically throughout the institute. An advisory committee representative was elected by each of the Specialty Interest Groups and the participants within these groups were encouraged to contact their representative regarding suggestions or concerns about the institute. Though participants were encouraged to interact directly with the staff this procedure provided an additional means to facilitate feedback. The types of concerns and problems discussed in these meetings were quite varied. They included such concerns as the temperature of the meeting rooms, the length of sessions and the need for special ad hoc meetings. The staff felt that the sessions with the advisory committee were most helpful in maintaining an open relationship with the participants.

From suggestions made by the advisory committee, and the group in general, it was decided that several ad hoc meetings should be held for interested individuals. Sign-up sheets were placed on the bulletin board and meetings were planned when enough participants were interested in a particular topic. The first of these sessions, which were held outside of the regular time schedule, was a meeting of those interested in the National Conference on Health Occupations Education to be held in New Orleans in February of 1970. This ad hoc session was to acquaint participants with the plan for the invitational conference which Robert M. Tomlinson was to direct, and to solicit suggestions from them. Jacob Stern, who made the initial presentation on educational objectives, led an ad hoc meeting for those participants who desired additional information or assistance in this area. Another ad hoc meeting, chaired by Lewis Holloway, discussed degree programs to prepare teachers and administrators for health occupations education. Although the institute dealt primarily with short-term teacher education activities there were many participants who were also concerned about degree programs. An ad hoc meeting was also held for those participants interested in sharing concerns in the area of student selection.

After the general program of activities was concluded on the final day of the institute a group of individuals who were not rushed to make transportation connections held a meeting to discuss problems in the field of health occupations education. One of the concerns expressed was the need for better coordinated efforts in the collection and dissemination of health occupations education reports and information. Although there are national clearing houses for research reports and information which cover the health occupations education area, the group felt there is additional need for a system of sharing which is specific to this area. Also expressed was the need for more specialty-oriented institutes. These would be action-oriented institutes for the various health specialties, and sub-fields, designed to study the utilization of personnel and relationships among these personnel, and to implement appropriate curriculum study activities. A third major concern expressed was the need for more occupational analysis studies.

During the first week of the institute those participants who had enrolled for course credit were asked to prepare a short descriptive statement of the objectives which they wished to achieve by attending the institute. At the end of the institute they were to submit a short paper describing their achievement of these stated objectives. As could be expected, there was some degree of variation in the quality of this documentation but, in general, these materials were very good.

THE MODULES

Volume II of this final report was distributed earlier under the title Guidelines and Supportive Papers for Planning and Conducting Short-Term Teacher Education Activities. This document is composed of six modular units each containing guidelines which include educational objectives, instructional strategies, annotated bibliography and supplementary materials; as well as papers prepared from presentations given during the institute. This section will not repeat the information provided in Volume II, but will present other information about the modular units which formed the organizational structure of the institute.

MODULE I - SUPPORTIVE PERSONNEL IN THE CHANGING HEALTH INDUSTRY

For some time now there has been a growing national concern about health care delivery and changes occurring in the health care industry, particularly as related to the preparation and use of supportive personnel. It was appropriate therefore that the first modular unit was designed to deal with the dynamics of change in the health care industry.

The presentations made by Elizabeth Kerr, Helen Powers, and Robert Tomlinson followed very closely the educational objectives which had been stated for this unit. Each presentation was well received by the participants. The participants were then given the charge to meet in their General Interest Groups to discuss the presentations and the topic, "Common and Unique Problems Across Health Specialty Fields." In identifying some of the most critical problems in the health field, participants were able to see that many of their problems were common across the various health specialty fields. Included in the supplementary materials for this modular unit (Volume II) is a report of the discussions during these small group sessions. One individual from each group was designated as a reporter to give a synopsis of their group's discussion in a general session at the end of the modular unit. There was a great deal of interest and willingness to consider the problems in the health care field.

MODULE II - DEFINING AND DESCRIBING THE EDUCATIONAL PRODUCT

Because of the current interest in occupational analyses and the writing of educational objectives these two curricular concerns were identified as a separate modular unit rather than including them as part of the unit on designing learning programs. A great deal has been written and many studies have been done on analyzing occupations using job and task analysis procedures. The approaches taken by Jacob Stern and Robert Tomlinson in the two presentations on this topic were to analytically examine occupations by utilizing conceptual models. Jacob Stern took a general approach to the utilization of conceptual models whereas Professor Tomlinson's presentation was designed to look at a specific health field. Following these presentations the Specialty Interest Groups met for the first time and discussed conceptual models. Since these were relatively abstract concepts, and time was rather limited, it was only possible to "scratch the surface" on this topic in the small group discussions. After the small group sessions the total group met to discuss the issues which had been examined in the small groups. The staff members served as a panel for this general session.

The second portion of this modular unit dealt with preparing and utilizing educational objectives. Jacob Stern made a presentation on writing educational objectives at various levels of specificity which was followed by Specialty Interest Group sessions to discuss educational objectives and/or practice writing them. During these small group sessions, Task Groups (TG) were designated. These groups began preparing educational objectives for the micro-experiences which they would be doing during the second week of the institute.

To provide an example of educational objectives in a health field, Bruce Spivey, a medical educator, conducted a general session on objectives in medical education (Ophthalmology). His study was designed to assess the appropriateness of a set of ophthalmology objectives which he had developed for medical students, and in effect combined an occupational analysis with a study on educational objectives. This served as a most fitting application of these two concepts. Following this general session the Specialty Interest Groups, and their Task Groups, met once again to work on writing educational objectives.

MODULE III - THE LEARNER AND LEARNING

The initial presentation for this unit was entitled "Social Forces and Their Impact on the Educational Process." Jacob Stern did an excellent job of describing some of the social forces with which the educator must deal if he is to function successfully in this arena. This presentation was followed by Michael Masucci speaking on the topic, "Social Forces and Their Impact on the Student." As a counseling psychologist, he was well qualified to describe how social forces affect students. Following his presentation Professor Masucci distributed paper and asked the participants to indicate their feelings about the institute at that point in time. He encouraged them to specify positive and negative feedback of any type. The responses were collected for use on the following day.

The next activity for this unit was a presentation on the process of learning by Duane Anderson. He provided the participants with basic information on how learning takes place, different learning theories and principles related to learning.

In a general session Professor Masucci utilized the statements and questions which participants had written for him the previous day to stimulate a discussion designed to achieve several objectives. This session served to show participants the types of problems individuals have in approaching new educational situations. The activity also had cathartic effects, for several individuals had become rather concerned about their ability to absorb the large amount of material which had been presented during the first three days of the institute. The session became a "wide open" discussion covering a variety of topics, some of which are reported in Volume II.

Michael Masucci next led the group in a lively discussion on student selection procedures. This was followed by General Interest Group Sessions for further consideration of this topic. In a general session the institute staff led a summary discussion of the learner and learning unit.

As the institute progressed it was noted that some participants were not very knowledgeable about the philosophy and operation of vocational education programs. The institute was designed primarily for vocational education personnel but individuals associated with all levels, such as the allied health professions, were invited to attend because of their interaction in the articulation between programs and because of the possible joint teacher-education activities. Therefore, a general session was planned in which Larry Borosage chaired a symposium made up of staff member Robert Tomlinson and four selected participants. Each spoke on vocational education in general and specifically as it related to their position. This session proved quite helpful in assisting individuals with a variety of backgrounds and philosophies to work together toward the common objectives of the institute.

MODULE IV - DESIGNING LEARNING PROGRAMS

As shown in the educational objectives for Unit 4 (Volume II) the major topics included in this unit were curriculum planning, instructional strategies, instructional media and the area of administration and coordination. A general session on instructional strategies, which included a film, "New Paths to Learning," was conducted by the entire staff using a symposium format. Duane Anderson related instructional strategies back to his earlier presentation on the learner and learning and Lawrence Borosage presented concepts from communication theory and practice which were particularly relevant.

The topic of curriculum planning was presented by Lawrence Borosage. Cal Mether provided a general introduction to instructional media utilizing an impressive multi-media approach. This was followed by presentations on specific types of instructional media by Keith Dollinger, James Orth and Robert Long. In the evening following the sessions on instructional media Robert Long made equipment available and worked with those individuals specifically interested in the production and use of overhead transparencies. A display of Trainex filmstrips and records was made available as was material on the audio-tutorial approach to Associate Degree Nursing as developed at Delta College in Michigan.

For the topic of administration and coordination, Robert Tomlinson led a panel discussion composed of staff members, consultant-presenters and institute participants. Following the general session the General Interest Groups met for further discussion of this topic.

MODULE V - EVALUATION IN THE EDUCATIONAL PROCESS

This unit was divided into the areas of faculty evaluation and student evaluation. Lawrence Borosage presented an overview of all aspects of evaluation as it relates to the educational process. The session on faculty evaluation led by Duane Anderson developed into a lively and lengthy discussion.

Classroom testing was sub-divided into two presentations by Charles Porter. The first examined concepts and principles related to writing good test items. The second presentation on scoring, compiling scores and grading was something new for many participants as Professor Porter dealt with the utilization of standard scores.

MODULE VI - THE EDUCATIONAL PROCESS

This unit was designed to examine the process of micro-teaching as a means for stimulating the actual educational process and also with learning experiences in actual health programs. The first presentation was an orientation to micro-teaching by Lewis Holloway. Participants were introduced to micro-teaching by viewing micro-experiences on video tape and by a lecture-discussion presentation. This session was held on Friday of the first week in order to prepare participants for their involvement in micro-experiences during the second week of the institute. Participants were given time in their Specialty Interest Groups and Task Groups to prepare micro-experiences.

Prior to doing their micro-experiences, Richard Nelson gave a further presentation and demonstration on micro-teaching utilizing some of the special equipment which is available. Video tape recording equipment was made available several evenings during the second week so that participants could become acquainted with it. Several of the micro-experiences were completed during the evening sessions. Other micro-experiences were conducted during designated time in the institute schedule. Several of the video tapes made during the micro-experience activities were shown to a general session of participants to share specific experiences. Each participant had an opportunity, individually or within a group, to be part of a micro-experience. Many of the participants who were not teachers utilized the micro-experiences for purposes more fitting to their roles than teaching.

Lawrence Borosage led a session on conducting short-term teacher activities which included reports on the types of teacher education activities which the Implementation Groups were planning. Two other topics somewhat related to this unit were included at this point in the institute. Lewis Holloway conducted a short session on research dissemination systems which provide service to the health occupations education field. The entire staff discussed with the participants the need for, and implementation of, research in health occupations education.

INFORMAL ACTIVITIES

From experience with similar activities, the staff was aware that substantial learning occurs in informal interactions among participants and staff. Although it was expected that a great deal of sharing would occur spontaneously, the staff attempted to facilitate interaction whenever possible. It was recognized that if the group had numerous opportunities to socialize that an informal atmosphere would develop which would carry over into the more formal aspects of the institute.

Following the first day of the institute a social evening was held at the Ox Yoke Inn at the Amana Colonies. Buses and cars were provided and the majority of participants, staff and special guests were in attendance. The evening began with an "Attitude Adjustment Hour" which was followed by an excellent family-style meal.

Although no other planned social activities were held, a great many occurred spontaneously. Small groups of participants and staff had meals together regularly, picnics were held, some played tennis together, pool parties developed, and "rap" sessions in the Iowa House and at the Old Capitol Motel were an every evening event. On the weekend, carloads of participants attended the Iowa State Fair which was in progress, visited the Herbert Hoover birthplace and library or toured parts of eastern Iowa. Late Sunday afternoon the project director and his wife arranged an impromptu party for a number of participants. Particpants picked sweet corn and tomatoes, fixed hamburgers, and put together a picnic dinner. Several participants rode horses while others played yard games or sat and visited.

The staff was quite pleased with the effect the informal activities had on the more formal aspects of the institute. This may have been a significant factor in contributing to the overall success of the institute. It is felt that the general attitude which developed has contributed to participants maintaining contact with one another and the staff over the period since the institute, and why one still hears of the "Iowa Group" at various national meetings.

It seems appropriate to state that the participants worked hard and played hard -- the activities often being complementary. The formal sessions were not very formal, and whenever the informal activities were in progress one would find groups discussing institute presentations, concerns about the health field or their own specific programs and problems. At the conclusion of the institute a "special awards" session was held recognizing several of the participants for their unique contributions which helped to make the institute such a pleasurable experience.

IV. INSTITUTE EVALUATION

THE ON-GOING ASSESSMENT

PROCEDURES

The general purpose of this evaluation was to examine the participants, the locale, the events, and the outcomes of the institute. Specifically the evaluation sought to assist the institute staff in ascertaining the extent to which the objectives for the institute were achieved. Attention was given to the relationship between what the institute staff set out to do and what actually transpired. An effort was made to determine the factors contributing to various successes and failures. The analysis of data was first descriptive, then judgmental. These descriptions and judgments made possible, recommendations and suggestions for the conduct of subsequent short-term teacher education activities.

To ascertain the extent to which the stated objectives were attained data were collected regarding various aspects and characteristics of the institute. Separate attention was given to the circumstances existing at the onset of training, to the teaching-learning transactions, and to the outcomes. The first type of data collected pertained to the characteristics of the learner (_e.g._, knowledge regarding the institute topics, perception of present role, etc.). A second type of information was the interaction that takes place between the information source and the learner. Other types of data were the learning outcomes of the instructional process (_e.g._, content mastery, knowledge gained, attitude change, etc.).

To obtain information of each of the previously mentioned types, five data collections instruments were developed. Data were secured from individual participants, from staff members, and from a group designated as an "evaluation committee." The evaluation committee was composed of five individuals randomly selected from the population of institute participants. Individual committee members were to represent, to the best of their ability, the views of the participants with whom they associated in their respective specialty interest groups and general interest groups.

Following is a description of each of the primary data collection instruments: The formats for these instruments were structured so that participants could complete them in a relatively short time period with only self instruction. All forms were structured so that the information obtained could be readily coded and punched into data cards for computer analysis. A copy of each data collection instrument is presented in Appendix E.

Role Perception Inventory

The first data gathering device was the Role Perception Inventory. The purpose of this instrument was to measure participants' perception of their role in health occupations education. The semantic differential developed by Osgood et al[1] was modified for use in this study. Twenty-five bipolar descriptive scales were constructed to measure participants perception of the concept -- Present Role in Health Occupations Education. The descriptors were categorized as "Characteristics of Role" (items 1, 3, 7, 8, 10, 12, 14, 16, 17, 19, 21, 23, and 24) and "Sources of Role Conflict" (items 2, 4, 5, 6, 9, 11, 13, 15, 18, 20, 22, and 25). Scale polarity and order of descriptors were randomized to counteract response bias tendencies. The subjects task was to indicate for each pair of descriptors the direction and intensity of his response on a seven step scale. The scales were coded one through seven, from left to right. The form was administered by mail approximately three weeks prior to the beginning of the institute and again following the closing general group session.

Self-Rating Scale

The second data gathering instrument was the Self-Rating Scale. From the statement of institute objectives, sixteen content areas were outlined. A five alternative numerical rating scale was constructed for each item. The subject was to indicate the extent of familiarity with each of the topic areas. The form was administered along with the previously described Role Perception Inventory. The post-test version was included as part of the Participant Opionionnaire and Evaluation Instrument.

Participant Opinionnaire and Evaluation Instrument

The third data gathering instrument was the Participant Opinionnaire and Evaluation Instrument. This form was administered following the final general group session and was designed to measure the "operational" aspects of the institute (scheduling and organization; content and presentations; environment and facilities; and satisfactions). A second aim was to obtain information regarding the participants' mastery of the main concepts that were presented during the institute . Subjects were asked to rank the sixteen topic areas according to their "relevance and usefulness" and a second time according to their "difficulty." A series of objective and open-ended questions followed to obtain additional data related to the rankings. A final part of this post-test version of the Self-Rating Scale.

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[1] Osgood, C.E., Suci, G.J., and Tannenbaum, P.H., The Measurement of Meaning. Urbana, Illinois: University of Illinois Press, 1957.

Module Evaluation

The fourth instrument was the Module Evaluation. This instrument was distributed to members of the evaluation committee following completion of each of the six modular units. Each member completed the form and returned it the following day. This procedure was used so that more valuable lecture-discussion time would not be taken. The form was specifically designed to obtain information regarding the content, presentations, and guidelines for each modular unit.

Staff Institute Evaluation

The final instrument was the Staff Institute Evaluation. The purpose of this form was to obtain information from the institute staff regarding scheduling and organization, environment and facilities, participants and outcomes. A series of objective questions followed each of the four main parts of the instrument. To permit comparisons with participant responses, a number of items were duplicated from instruments used to collect participant data. Opportunities were also provided for staff members to make comments, recommendations, etc., regarding the various aspects of the institute.

RESULTS

This section contains the findings obtained from the five instruments that were designed to provide information regarding the three sources of data -- learner characteristics, institute transactions, and learning outcomes. The findings are based on individual (both participants and staff) and evaluation committee responses. With the exception of one exercise (Participant Opinionnaire and Evaluation Instrument, page 5, item number 7), the majority of participants had no difficulty following the self instructions and completing the exercises. It is a valid assumption that the data obtained is representative of the total group.

Presentation of the data is both tabular and descriptive. The purpose of the description and discussion is only to supplement the tabular presentations. Judgments regarding the findings are made with reference to expectations and institute objectives.

Description of Role

For this portion of the study it was hypothesized that health occupations personnel were confused regarding their role in education. The adaptation of the semantic differential technique was based on the conviction that a role conflict could be detected and that shifts in perception of role could be measured. To test the validity of the a priori classification of descriptors (Characteristics of Role and Sources of Role Conflict) a principal axis factor analysis was performed on the pre-test data. The results of the analysis are shown in Table 1. Only factor loadings in excess of $|.40|$ are considered. The analysis

TABLE 1

PRE-TEST FACTOR STRUCTURE

No.	Factor Loading		
		I	
1	.45		Autocratic-Democratic (1)
3	.74		Inflexible-Adaptable (1)
7	.61		Low Esteem-High Esteem (1)
8	-.70		Optimistic-Pessimistic (1)
10	-.70		Active-Passive (1)
12	.53		Supervised-Supervises (1)
14	.71		Inefficient-Efficient (1)
16	.74		Dull-Stimulating (1)
17	-.63		Organized-Disorganized (1)
19	.69		Unpredictable-Predictable (1)
24	.44		Dominant-Submissive (1)
		II	
5	-.81		Manual-Intellectual (2)
9	.60		Didactic-Clinical (2)
11	-.73		Service-Education (2)
		III	
4	-.55		Generalist-Specialist (2)
20	.83		Teaching Object.-Learning Object. (2)
21	-.43		Innovative-Traditional (1)
25	-.70		Evaluate Objectives-Evaluate Content (2)
		IV	
6	.78		Health Specialist-Teaching Specialist (2)
18	.79		Technical Competence-Teaching Comp. (2)
		V	
1	.51		Autocratic-Democratic (1)
22	.74		Content Oriented-Person Oriented (2)
23	.48		Dependent-Independent (1)
		VI	
2	-.61		Professional-Technical (2)
24	-.68		Dominant-Submissive (1)

(1) Characteristics of Role
(2) Sources of Role Conflict

revealed that eight factors accounted for 70 per cent of the common variance. However, two factors contained only a single loading above |40| (licensure-certification, and vocational-technical). These two factors were not considered in the interpretation.

The distribution of factors for the pre-test data serves to substantiate the construct validity of the test instrument and suggests the existence of role conflicts. Factor I accounts for the largest portion of the variance (20%) and contains exclusively descriptors categorized as "Characteristics of Role." The descriptors categorized as "Sources of Role Conflict" were fairly evenly distributed amont the other seven factors, indicating that this construct was factorially complex. Factor II accounts for ten per cent of the variance; Factor III, nine per cent; Factor IV, seven per cent; Factor V, six per cent; and Factor VI, six per cent. Apparently health occupations educators can easily describe their role in terms of general characteristics as witnessed by the loadings on Factor I. The number of additional factors and the distribution of the remaining common variance is an indication of the confusion existing regarding the role of the health specialist in education.

Changes in Role Perception

A pre-test - post-test analysis was used to measure the change in participants' perception of their role in health occupations. Table 2 presents the mean scores for each of the twenty-five bipolar scales. A high mean score indicates that subjects marked closer to the right hand scale. For example, participants saw their role as being more education-oriented on the post-test than on the pre-test (5.1 vs 5.4). A t-test for correlated samples was used to test the significance of the difference between means. Since no hypotheses regarding direction of change was made, a two-tailed test of significance was applied. The levels of significance chosen were the .10 and .05 levels.

As indicated in Table 2, statistically significant differences were obtained for eight of the twenty-five scales. The institute participants rated their role after the institute, as compared to the beginning of the institute, as being less adaptable, higher on the education scale, lower on the technical scale, higher on teacher competence, less predictable, closer to teaching objectives (rather than learning objectives), more person-oriented and more dominant. These changes, in general, are viewed as positive by the institute staff.

Change in Factor Structure

A major objective of the institute was to cause health occupations education personnel to critically examine their role in education. It was the aim of the institute staff to assist participants in the

TABLE 2

ROLE PERCEPTION INVENTORY

	Descriptors	Pre-test Mean	Post-test Mean	t-test for Correlated Samples
1.	autocratic-democratic	5.2	5.3	.57
2.	professional-technical	2.9	2.7	1.00
3.	inflexible-adaptable	6.2	6.0	2.17**
4.	generalist-specialist	4.4	4.4	.43
5.	manual-intellectual	5.2	5.4	1.56
6.	health specialist-teaching specialist	4.4	4.7	1.58
7.	low esteem-high esteem	5.7	5.7	.61
8.	optimistic-pessimistic	1.9	1.9	.29
9.	didactic-clinical	4.0	3.9	.66
10.	active-passive	1.8	2.0	1.58
11.	service-education	5.1	5.4	2.00**
12.	supervised-supervises	5.7	5.6	.66
13.	licensure-certification	4.1	4.1	.10
14.	inefficient-efficient	5.6	5.8	.93
15.	vocational-technical	4.2	3.8	1.69*
16.	dull-stimulating	6.3	6.3	.15
17.	organized-disorganized	2.5	2.3	1.28
18.	technical competence-teaching competence	4.5	5.1	3.57**
19.	unpredictable-predictable	5.4	5.1	1.89*
20.	teaching objectives-learning objectives	4.4	4.0	1.86*
21.	innovative-traditional	2.5	2.4	.23
22.	content oriented-person oriented	4.5	5.1	3.20**
23.	dependent-independent	4.8	4.8	.20
24.	dominant-submissive	3.2	2.9	2.54**
25.	evaluate objectives-evaluate content	3.2	3.0	.91

df=76 *p. < .10, two tailed **p. < .05, two tailed

clarification of their role and to challenge them to think positively about their "new" role as a teacher educator. It was expected therefore that the role descriptors would "restructure" at the completion of the institute.

To determine the change in factor structure a principal axis factor analysis was performed on the post-test data. A normalized Varimax rotation produced the factors shown in Table 3. Eight factors accounted for 68% of the common variance. One factor contained only a single loading above $|.40|$ (teaching objectives-learning objectives) and was not considered in the interpretation. Factor I accounts for fourteen per cent of the variance; Factor II, eleven per cent; Factor III, ten per cent; Factor IV, seven per cent; Factor V, eight per cent; Factor VI, seven per cent; and, Factor VII, seven per cent.

A comparison of the pre-test - post-test factors indicates that considerable restructuring occurred. Factor I in the pre-test analysis represented descriptors categorized as "Characteristics of Role." The descriptors subsumed under this factor separated into two factors (Factor I and Factor III) in the post-test analysis. This suggests that the institute was instrumental in causing participants to more closely examine the somewhat superficial "Characteristics of Role" and make finer distinctions at the conclusion of the institute. Factor I appears to deal with the image that participants have of their role. This role image may be described in terms of high esteem, optimistic, active, supervises, efficient, stimulating, organized, and dominant. Factor III appears to be a role orientation factor. Especially significant was that the content oriented-person oriented descriptor correlated highly with this factor. The role orientation of health occupations educators was described as democratic; adaptable; high esteem; optimistic; stimulating; and person oriented. Descriptors seven, eight, and sixteen, were included in both Factors I and III. It appears that the variance associated with these items, was related to two kinds of roles -- that of an administrative role in Factor I, and that of a faculty role in Factor III.

Pre-test and post-test Factor II appear to deal with the traditional health vs. education role conflict situations. In the post-test analysis descriptor nine (didactic-clinical) is absent but both descriptors loading significantly on pre-test Factor IV are included in post-test Factor II. At the conclusion of the institute this role conflict factor was defined as professional, intellectual, teaching specialist, education, teaching competence, and predictable. The loading for descriptor nineteen (unpredictable-predictable) appears especially meaningful. The fact that participants perceived the role conflicts as predictable suggests that the institute was partially successful in resolving the conflicts.

Post-test Factors IV, VI, and VII did not contain more than two descriptors which made meaningful interpretation difficult.

The remaining factor, Factor V, seemed to represent not a role conflict _per se_ but rather a conflict related to instructional objectives. This factor was characterized by the following descriptors: supervises

TABLE 3

POST-TEST FACTOR STRUCTURE

No.	Factor Loading		
7	.56	I	Low Esteem-High Esteem (1)
8	-.53		Optimistic-Pessimistic (1)
10	-.65		Active-Passive (1)
12	.40		Supervised-Supervises (1)
14	.76		Inefficient-Efficient (1)
16	.53		Dull-Stimulating (1)
17	-.70		Organized-Disorganized (1)
24	-.66		Dominant-Submissive (1)
2	.55	II	Professional-Technical (2)
5	-.59		Manual-Intellectual (2)
6	-.77		Health Specialist-Teaching Specialist (2)
11	-.49		Service-Education (2)
18	-.70		Technical Competence-Teaching Comp. (2)
19	-.55		Unpredictable-Predictable (1)
1	.81	III	Autocratic-Democratic (1)
3	.50		Inflexible-Adaptable (1)
7	.48		Low Esteem-High Esteem (1)
8	-.49		Optimistic-Pessimistic (1)
16	.48		Dull-Stimulating (1)
22	.74		Content Oriented-Person-Oriented (2)
13	.71	IV	Licensure-Certification (2)
23	-.72		Dependent-Independent (1)
12	-.45	V	Supervised-Supervises (1)
21	.61		Innovative-Traditional (1)
25	.82		Evaluate Objectives-Evaluate Content (2)
4	.78	VI	Generalist-Specialist (2)
9	.72		Didactic-Clinical (2)
15	.82	VII	Vocational-Technical (2)
16	.50		Dull-Stimulating (1)

(1) Characteristics of Role
(2) Sources of Role Conflict

innovative, and evaluate objectives. This suggests that the institute was successful in promoting the idea of behavioral based educational objectives as a newer, possibly better way of defining and evaluating learning outcomes.

Although the differences in the overall factor structure were not entirely interpretable, there is some indication that meaningful, identifiable shifts did occur. Moreover, the shifts that are identifiable appear to be consistent with the objectives of the institute.

The construct identified as "Characteristics of Role" remained fairly stable. The fact that the descriptors diverged to two factors in the post-test lends support to the earlier speculation that participants would make finer distinctions among the role characteristics at the conclusion of the institute. As a result, this construct was seen to be composed of a role image factor and a role orientation factor.

The most obvious conclusion regarding the construct, "Sources of Role Conflict," is that it remains factorially complex. Both analyses indicate the possibility of several different types of role conflicts. The most meaningful role conflict descriptors appear to be those significantly loaded on post-test Factor II. Other conflict descriptors pertain more to the objectives and purpose of health occupations education rather than to role description. Both analyses indicate the possibility of several nebulous, non-descriminating scales.

The limitations of this portion of the study are several. Probably the most important relates to the factorial composition of the test instrument. The factor analysis seemed to substantiate the validity of the first construct. However, the data suggests that further research is needed to identify the primary descriptive scales describing role conflicts. A second limitation relates to the permanence of the induced role changes. The ultimate test of the institute's effectiveness is the stability and permanence of its effect. A followup administration of the Role Perception Inventory would permit more positive statements regarding the institute's effectiveness.

Despite the limitations, the study indicates that attitude change did occur and that the semantic differential can be used to measure subtle shifts in attitude. Especially significant are the implications for evaluating future short-term institutes. The use of semantic differentials instruments of known factorial composition could aid substantially in the appraisal of affective based educational problems.

Background Experience and Knowledge Gain

Participants were asked to respond to a five point self-rating scale on the extent to which they were familiar with the institute topics. The response categories were: very familiar (5), rather familiar (4), somewhat familiar (3), hardly familiar (2), and not at all familiar (1). Table 4 summarizes the self-rating pre-test and post-test

TABLE 4

SELF-RATING SCALE: KNOWLEDGE GAIN

Topic Area	Pre-test Mean	Post-test Mean	t-test for Correlated Samples
Modular Unit I:			
1. Identifying factors affecting change in the health industry	3.4	3.9	4.52**
2. Examining voc-tech. programs for auxiliary personnel	3.0	3.4	3.02**
3. Analyzing the role of the health specialist as teacher	3.2	4.0	5.51**
4. Analyzing the role of the teacher of teachers	2.8	3.8	7.04**
Modular Unit II:			
5. Developing conceptual models to analyze occupations	2.2	3.3	8.34**
6. Describing the educational product in behavioral terms	3.2	3.8	3.93**
Modular Unit III:			
7. Considering factors which affect learning	3.9	4.0	1.58
8. Examining the student selection process	3.7	3.8	.55
Modular Unit IV:			
9. Planning curricula	4.0	4.0	.48
10. Selecting instructional strategies	3.5	3.9	3.05**
11. Selecting and producing instructional media	3.4	3.8	3.22**
12. Conducting administrative and coordination activities	3.9	3.8	1.30
Modular Unit V:			
13. Evaluating instructional personnel	3.5	3.6	1.27
14. Measuring and evaluating learning achievement	3.6	3.7	.86
Modular Unit VI:			
15. Using micro-teaching as a tool for improving instruction	2.2	3.8	9.58**
16. Conducting short-term teacher education activities	2.9	3.6	5.75**

df=70 *p. <.05, two tailed **p. <.01, two tailed mean scores. A t-test for correlated samples was used to test the significance of the difference between means. Since no hypothesis was made regarding direction of change, a two-tailed test of significance was used to interpret the t values.

Statistically significant differences were obtained at the .01 level for ten of the sixteen topic areas. Although there was no control group with which to compare these findings, it seems reasonable to conclude that the participants gained a significant amount of knowledge in those areas measured by the self-ratings. Grouping the topics according to their respective modular units indicates that significant differences were obtained for Modular Units I, II, VI and for two of five topic areas in Unit IV. Nonsignificant differences were obtained for Units III and V. A close examination of these two modular units is in order to attempt an explanation for the nonsignificant differences of their corresponding topic areas (see Module Evaluation). It should be noted however, that the pre-test means for the six areas showing nonsignificant differences were greater than the average pre-test means for the other ten topic areas. This would indicate that subjects were already somewhat familiar with the topics prior to the beginning of the institute.

Module Evaluation

The purpose of the module evaluation was to make judgments about the content, presentations, and guidelines for each unit. Due to the full schedule and the demands on participants' time, an evaluation committee was selected to critique each module. The rationale supporting the use of an evaluation committee was sound, but in practice the results were variable. It was intended that the evaluation committee, at the end of each modular unit, would collectively discuss and complete an evaluation form. However, the pressing schedule prevented doing so. As an alternative, the evaluation forms were given to each member individually to complete and return. Each member was supposed to solicit commints from other participants and make judgments which reflected a cross-section of participants' views. The extent that this was done is doubtful. The degree of interest demonstrated by the evaluation committee members could be characterized as moderate. The failure of one member to complete two forms and the lack of written comments supporting objective type items severely hampers the extent to which generalizations can be made. A number of tentative judgments will be attempted although the representativeness of the data is questionable. Table 5 summarizes the item mean responses for each of the six modular units.

Module I, Supportive Personnel in the Changing Health Industry. The responses pertaining to content and presentation items were all considerably above the mean. The behavioral objectives, annotated bibliography, and handout materials were considered very good. The portions of the guidelines most in need of improvement were those dealing with

TABLE 5

MODULE EVALUATION

	Modular Unit					
Response	I.	II.	III.	IV.	V.	VI.
1. To what extent was the information presented new and informative?	3.6	4.0	2.8	3.8	3.5	3.8
2. To what extent do you expect to be able to use what has been presented in this modular unit?	3.8	3.6	3.2	3.6	3.2	4.0
3. Indicate the extent to which the presentations of the modular unit were stimulating.	4.2	4.0	2.6	4.0	4.0	4.5
4. Indicate the suitability of the instructional strategies (lecture, discussion, etc.) by which the topics were presented.	3.8	4.2	3.6	4.6	3.8	. .5
5. Circle the number which best represents the degree to which the presentations were organized	4.2	3.6	2.4	4.2	3.2	4.5
6. Indicate the degree to which the presentations were clear and to the point.	3.8	.36	2.4	4.0	3.2	4.0
7. Indicate the extent to which the speakers were enthusiastic about the topics presented.	4.6	4.4	4.0	4.6	4.3	5.0
8. Indicate the degree to which you feel the guidelines were appropriate for this modular unit:						
A. Behavioral objectives	4.0	4.4	4.2	4.6	4.0	4.0
B. Annotated bibliography	5.0	4.8	4.6	4.6	3.2	4.3
C. Suggested instructional strategies	3.5	3.6	4.0	4.6	3.8	4.5
D. Handout materials	4.5	4.2	4.8	5.0	3.5	4.3
E. Assignment sheets	3.3*	**	**	**	**	3.7*
9. Indicate the extent, in general, to which you feel the stated behavioral objectives for this modular unit were achieved	3.0	2.6	2.8	3.8	3.8	3.8

*N=3
**No responses

the instructional strategies and assignment sheets. The first two presentations for this unit were longer than the scheduled times. It was the feeling of several individuals that this detracted from the first module and negatively affected beginning day activities. Additional comments indicated that time should have been allotted for questions following the main presentations. The concensus of the evaluation committee was that the objectives for Module I were somewhat achieved. The self-rating data reported in Table 4 revealed statistically significant gains for all four topics included in this unit.

Module II, Defining and Describing the Educational Product. The evaluation committee felt that the behavioral objectives for this unit were hardly achieved, even though all additional item ratings were well above the mean. Significant t values for the differences between means (Table 4) were obtained for topics included in this unit, although participants did not approach the level of competency stated in the objectives. The failure to achieve the objectives for this unit was apparently due to lack of individual and small group practice sessions and exercies. It was indicated that the "gestalt" was well presented, but specific examples of conceptual models, matrix applications, and behavioral objectives were not considered in sufficient detail to provide participants with immediately useable tools.

Module III, The Learner and Learning. The content and presentations for this module were uniformly criticized. The lack of apparent structure for the presentations was disturbing to most individuals. The participants welcomed the opportunity to verbalize problem situations with the presenters, but did not feel that doing so contributed to achieving the modular objectives. It was indicated that the guidelines, especially the objectives, were well done and would have resulted in an excellent module. Though lectures and discussions contributed little toward accomplishing objectives, many participants felt that the handout materials provided much valuable information. It should be noted that significant knowledge gains (Table 4) were not achieved for this modular unit. The data suggests a positive relationship between teaching effectiveness and learning outcomes. The conclusion that this module was the least well done of the six seems justified.

Module IV, Designing Learning Programs. The evaluation committee gave uniformly high ratings to all aspects of this module. Identified as factors contributing to the success of this module were the enthusiasm of staff members and the high quality of handout materials. In particular, the materials on curriculum design were judged to have long range value. However, as shown in Table 4 significant gains were not obtained for the two topic areas of Planning Curricula and Conducting Administrative and Coordination Activities. The apparent explanation relates to the relatively high pre-test means for these topics. While the content and presentations were considered to be above average, they were not of sufficient breadth or depth to add significantly to participants' previous knowledge.

Module V, Evaluation in the Educational Process. The interpretation of data for this module is very complex. The evaluation committee indicated that the behavioral objectives for this modular unit were rather well achieved. No item responses were rated below average. Yet Table 4 reveals that significant gains in participants' knowledge were not obtained. Again, this could probably be explained by the magnitude of the pre-test means for the two topic areas included in this unit. The only comment made regarding this module was a criticism of the use of traditional and uninspiring teaching methods.

Module VI, The Educational Process. This last module must certainly be regarded as one of the most successful. The presentations for this module were rated higher than for any other unit. Particularly noteworthy was the speakers' enthusiasm for the topics presented. It was indicated that the success of the module was in large measure due to the availability, interest, and assistance of staff members. The magnitude of the t values for the difference between pre- and post-test means for Modular Unit VI validate the learning outcomes.

Participants' Evaluation and Reactions

The participants were asked to react to various aspects of the institute for the purpose of ascertaining their degree of satisfaction. Table 6 summarizes the mean response for each item and the proportion of individuals responding to each category. Since the evaluation is primarily descriptive, no criterion levels were established for item responses. Conclusions and judgments are subjective interpretations of participants' responses.

Scheduling and Organization. The majority of participants (64%) did not feel that two weeks was too long a period to leave home and work to attend the institute. Sentiment was about evenly divided, however, regarding the period of time provided to learn the content of the institute. In general, the participants agreed (93%) that the institute was well organized. Only six per cent felt that the schedule was too fixed and 85 per cent felt that the topics were scheduled in an appropriate sequence. Sixteen per cent felt that more time should have been spent in individual presentations, but only mild sentiment was expressed for spending more time in discussion groups. Apparently the proportion of time allotted to general sessions and group discussion was satisfactory. The participants felt strongly that sufficient opportunities were provided to interact with both institute staff and other participants. The majority (66%) felt they were allowed enough time to pursue activities of their own choosing. One fourth of the participants would have preferred no evening meetings.

Content and Presentations.

The participants strongly agreed that the presenters were well prepared, and that presentations were stimulating and interesting. The data suggests however, that the individual presentations may have been

TABLE 6

PARTICIPANT OPINIONNAIRE AND EVALUATION INSTRUMENT

	Response	Percent of Responses SA (5)	A (4)	N (3)	D (2)	SD (1)	$\bar{X}$
	Scheduling and Organization:						
1.	Two weeks was too long a period to leave work and home for the purpose of attending this institute	9	23	4	38	26	2.5
2.	Two weeks was too short a period in which to learn the content of this institute	11	32	9	32	15	2.9
3.	I was allowed enough time in which to pursue activities of my choosing	20	46	3	31	9	3.6
4.	I would have preferred not to have evening meetings	5	20	22	35	18	2.6
5.	Topics were scheduled in an appropriate sequence	39	46	3	9	3	4.1
6.	Sufficient opportunities were provided to interact with other participants	24	49	3	24	9	3.7
7.	The institute staff was inaccessible or unapproachable to get individual attention	1	5	3	15	76	1.4
8.	In general, the institute was well organized	62	31	3	4	0	4.5
9.	A greater proportion of time should have been spent in individual presentations than actually occurred	4	12	16	58	9	2.4
10.	A greater proportion of time should have been spent in work groups	12	34	15	34	5	3.1
11.	The schedule was too fixed	1	5	8	57	28	2.0
	Content and Presentation:						
12	Individual presentations were too long to sit and listen or to take notes	3	24	11	45	18	2.5
13.	The course content presupposed far more training than I had	4	11	12	37	37	2.1
14.	The presentations were stimulating and interesting	45	47	4	4	0	4.3

	Percent of Responses					
Response	SA (5)	A (4)	N (3)	D (2)	SD (1)	$\bar{X}$
15. The discussion leaders were effective in their role	53	42	4	1	0	4.5
16. The presenters were well prepared	45	47	3	5	0	4.3
17. I expect to be able to apply the content which was presented in the institute	45	47	4	4	0	4.3
18. The information presented was too elementary	1	12	4	47	35	2.0
19. I was stimulated to think objectively about the topics presented	34	62	4	0	0	4.3
20. Too much jargon was used by the presenters	5	18	9	45	23	2.4
21. Too much emphasis was placed on topics that are unimportant	0	7	11	59	23	2.0
22. The presentation of the content material was paced too fast	7	16	15	51	11	2.6
23. I am pleased with the teaching methods used for the institute	45	43	1	9	1	4.2
Environment and Facilities						
24. The "Learning Resource Center" was a valuable adjunct to the institute	39	47	9	4	0	4.2
25. The unavailability of books and journals interfered with attempts to master the content of each modular unit	1	15	15	49	20	2.3
26. My housing accommodation was satisfactory	62	37	0	1	0	4.6
27. The meeting rooms were adequate and conducive to learning	58	32	1	7	1	4.4
28. Recreational facilities were inadequate	11	19	18	41	12	2.8
29. The food services were poor	22	42	18	15	4	3.6
Satisfactions						
30. If I had to do it over again I would apply for the institute which I am just completing	55	34	4	7	0	4.4
31. I would recommend to others that they participate in an institute of this type	69	28	1	1	0	4.7

Response	Percent of Responses					
	SA (5)	A (4)	N (3)	D (2)	SD (1)	$\bar{X}$
32. I anticipate maintaining some type of contact with at least one member of the institute staff	53	32	14	1	0	4.4
33. It is likely that I will collaborate with someone else attending this institute on a future educational activity (other than those I already would be likely to work with	43	38	14	3	3	4.2
34. The staff should feel that it has accomplished its objectives during this institute	53	42	4	1	0	4.5
35. The participants accepted the objectives of this institute	16	64	9	9	1	3.8
36. The objectives of this institute were not the same as my objectives	5	30	18	38	9	2.8
37. We did not relate theory to practice	1	9	8	59	22	2.1
38. I did not think I would learn as much in this institute as I have	23	30	18	26	4	3.4
39. I was impressed with the qualifications and abilities of my fellow participants	43	39	14	3	1	4.2
40. Possible solutions to my problems were considered	19	59	16	5	9	3.9
41. I can see no advantage of this type of short term institute compared to other types of teacher education programs	1	3	3	35	58	1.5
42. Attempts to evaluate the institute (including the present form) interfered with more important activities	1	4	3	45	47	1.7

a little too long. Eighty-two per cent of the participants felt that important topics were emphasized and about two-thirds (62%) agreed that the content material was appropriately paced. The teaching methods used during the institute were considered satisfactory by 88% of the participants. Participants were stimulated to think objectively about the topics presented and most (92%) expected to be able to apply the content was presented. The content was not considered too elementary, nor was too much jargon used by the presenters. Participants also felt that they had sufficient previous experience to deal effectively with the course content.

Environment and Facilities. The participants almost unanimously agreed that housing accommodations were satisfactory and meeting rooms were adequate and conducive to learning. The fact that many campus eating facilities were closed during most of the institute was reflected in participants' responses. Sixty-four per cent indicated that the food services were poor. Responses were fairly evenly distributed regarding the adequacy of recreational facilities. This was probably also a reflection of the fact that the Iowa Memorial Union was not in operation at the time of the institute. The Learning Resource Center was considered a valuable adjunct to the institute. Most participants (69%) did not feel that they were handicapped by the unavailability of books and journals.

Satisfactions. In retrospect, 89% of the participants agreed that they would apply for the institute again, and 97% would recommend to others that they participate in a similar educational activity. The participants (80%) accepted the objectives of the institute, although the data suggests that the institute objectives were not necessarily the same as participants' objectives. However, 95% responded that the staff should feel that it has accomplished its objectives. Compared to other types of teacher education programs, a short term institute was seen by 93% of the participants to have positive advantages. Over three-fourths (78%) of the participants felt that possible solutions to their problems were considered. Eighty-one per cent indicated the likelihood of collaborating with a fellow participant on a future educational activity, and 85% anticipated maintaining some contact with a member of the institute staff. The high calibre of individuals selected for the institute was reflected in the responses. Eighty-two per cent indicated that they were favorably impressed with the qualifications and abilities of fellow participants. A majority of participants (92%) did not feel that attempts to evaluate the institute interfered with other important activities.

Content Relevance and Usefulness. To arrive at some generalizations regarding the importance of the topic areas, participants were asked to rank each topic according to its relevance and usefulness. The mean rankings for the sixteen topics are shown in Table 7. The restricted range and the small intervals between rankings indicate the topics were fairly homogeneous.

The topic area identified as Analyzing the Role of the Health Specialist as Teacher was included in the top quartile of relevance by 43% of the participants. A related topic -- Analyzing the Role of the Teacher of Teachers -- was ranked in the top quartile by 34% of the participants. Participants' comments indicated that the high ranking

TABLE 7

COURSE TOPICS: RELEVANCE AND USEFULNESS

Rank	Topic Areas	Mean Rank
1.	Analyzing the role of the health specialist as teacher	6.05
2.	Planning curricula	6.97
3.	Selecting instructional strategies	7.04
4.	Analyzing the role of the teacher of teachers	7.12
5.	Conducting short-term teacher education activities	7.31
6.	Considering factors which affect learning	7.38
7.	Describing the educational product in behavioral terms	7.81
8.	Measuring and evaluating learning achievement	8.01
9.	Evaluating instructional personnel	8.28
10.	Developing conceptual models to analyze occupations	8.38
11.	Conducting administrative and coordination activities	8.41
12.	Selecting and producing instructional media	8.64
13.	Using micro-teaching as a tool for improving instruction	8.91
14.	Identifying factors affecting change in the health industry	8.93
15.	Examining voc-tech programs for auxiliary personnel	9.89
16.	Examining the student selection process	10.11

N=74

assigned to these topics were a result of the realization that the teacher educator must possess educational competencies in addition to technical knowledge and skills. Most participants recognized that to be effective the teacher must have a firm foundation in the methodologies of education and teaching.

Participants were also asked to indicate anything related to the topic areas that they would like to study further. Eighty-two per cent responded that they would like to pursue selected aspects of the institute topics in greater detail. The three most frequently mentioned topics were: Planning Curricula (16%), Conducting Short-Term Teacher Education Activities (13%), and Measuring and Evaluating Learning Achievement (10%). Frequencies for the remaining categories were fairly evenly distributed. In addition, participants indicated considerable interest in developing core curriculum in health occupations education and in ladder and lattice approaches.

It is significant that 52% of the individuals who indicated an interest in further study of related topics would like to attend a two to three day conference or workshop for that purpose. Little sentiment was expressed for attending a full semester course. Thirty-seven per cent indicated they would like to attend another two-week institute.

Content Mastery. To gain information about the participants' mastery of the main concepts presented during the institute, the participants were asked to rank each topic area according to difficulty. Table 8 presents the mean rankings for each of the sixteen topic areas.

Sixty-two per cent of the participants ranked the topic Developing Conceptual Models to Analyze Occupations in the top quartile of difficulty, with 30% of the group ranking it as the most difficult. A closely related topic -- Describing the Educational Product in Behavioral Terms -- was ranked in the first quartile of difficulty by 32% of the participants. Grouped according to modular units, Modular Unit II was viewed as the most difficult unit and Modular Unit V was ranked next in difficulty. The remaining twelve topic areas were not ordered in any meaningful way with corresponding modular units.

Although Modular Unit II was ranked as the most difficult, previous data revealed isgnificant gains in participants' knowledge for the two topics included in this unit. A cursory inspection of the data suggests little relationship between topic difficulty and knowledge gain.

The reasons given by participants for the difficulty of Module II pertained to lack of previous acquaintance, difficulty interrelating the many concepts and variables, and insufficient time devoted to application. For the individuals ranking Modular Unit II topics as the most difficult, 63% indicated at the conclusion of the course that the content was "extremely" or "rather" clear.

Staff Critique

Following the conclusion of the institute, the six member staff completed a short evaluation form. Five possible alternatives were offered for each objective statement. A space was provided for comments

TABLE 8

COURSE TOPICS: DIFFICULTY

Rank	Topic Areas	Mean Rank
1.	Developing conceptual models to analyze occupations	4.46
2.	Describing the educational product in behavioral terms	6.95
3.	Measuring and evaluating learning achievement	7.03
4.	Evaluating instructional personnel	8.24
5.	Analyzing the role of the teacher of teachers	8.37
6.	Using micro-teaching as a tool for improving instruction	8.46
7.	Conducting short-term teacher education activities	8.65
8.	Examining voc-tech programs for auxiliary personnel	8.71
9.	Examining the student selection process	8.84
10.	Selecting instructional strategies	8.92
11.	Conducting administrative and coordination activites	9.22
12.	Planning curricula	9.24
13.*	Considering factors which affect learning	9.32
13.*	Analyzing the role of the health specialist as teacher	9.32
15.	Selecting and producing instructional media	9.81
16.	Identifying factors affecting change in the health industry	10.51

* Tied Ranks

N=63

following each of the four main sections. Prior to completing the questionnaire, however, a discussion was held among staff members for the purpose of critiquing the institute. This discourse was tape recorded and eliminated the need for staff members to make additional written comments on the evaluation form. Table 9 is a tabular summary of the mean response for each item. The primary merit of this evaluation was to identify those aspects of the institute which should be improved when developing guidelines for model short-term institutes.

Scheduling and Organization. All aspects of scheduling and organization were rated as good or better. Particularly commendable were the smoothness of operation, adaptability to obstacles and feedback, and sensitivity of grievances. Apparently, a high degree of communication existed among the staff and between staff and participants. Rated somewhat lower was the balance between presentations and discussions. No suggestions were offered regarding how to improve the balance, but it is likely that more discussion time was in order. Staff responses also suggested that more preplanning could have improved scheduling and organization. All members agreed that more time to pursue one's own activities would have been desirable. This objective is highly desirable but very difficult to achieve due to the excessive demands on staff time during an intensive short-term institute.

Environment and Facilities. All staff members rated very good or better: the class and meeting rooms, housing facilities, teaching aids and equipment, resource and library materials. Three staff members resided locally and did not complete the questions regarding housing facilities. Eating and recreational facilities were uniformly criticized and were in agreement with participants' negative responses.

Participants. Each of the staff members expressed satisfaction with the participant group. Although a high degree of heterogeneity existed in the group, all staff were full of praise for the participants' willingness to work, intellectual curiosity, concern for applicability of content and aspirations. Presumably the fact that "completion of assignments" was rated somewhat lower is a result of factors other than participants' competencies or achievement. Insufficient time to complete assignments would be a probable explanation.

Outcomes. With the exception of one part of the module guidelines, the institute outcomes were all rated good and above. Rated very good were: personal objectives attained, professional associations initiated, contributions of advisory committee, and contribution to health occupations education. However, more attention should have been devoted to achieving specific modular objectives. Regarding the modular guidelines, the annotated bibliographies were rated near exceptional and the behavioral objectives and handout materials were concisered very good. The instructional strategies for each module could have been more comprehensive. The point of maximum criticism related to the assignment

TABLE 9

STAFF CRITIQUE

Response	Mean
Scheduling and Organizations:	
A. Sufficiency of preplanning	3.5
B. Smoothness of operation	4.5
C. Adaptability to obstacles and feedback	4.8
D. Sensitivity to grievances	4.5
E. Appropriateness of two week time period	4.3
F. Events sequenced appropriately	3.7
G. Time spent efficiently	4.0
H. Conformity to schedule	3.7
I. Balance between presentations and discussions	3.3
J. Quality of presentations	3.7
K. Quality of discussions	4.3
L. Sufficient time to pursue own activities	3.2
M. Informal interactions with participants	4.2
Environment and Facilities:	
A. Class and meeting rooms	4.8
B. Housing facilities	4.3*
C. Teaching aids and equipment	4.3
D. Resource materials, library	4.0
E. Office and work space	4.0
F. Eating facilities	3.0
G. Recreational facilities	3.0
Participants:	
A. Appropriateness of backgrounds	4.7
B. Willingness to work	5.0
C. Intellectual curiosity	4.2
D. Concern for applicability of content	4.3
E. Aspirations	4.6
F. Completion of assignments	3.8
Outcomes:	
A. Appropriateness of module guidelines:	
1. Behavioral objectives	4.2
2. Annotated bibliography	4.8
3. Suggested instructional strategies	3.7
4. Handout materials	4.0
5. Assignment sheets	1.8
B. Achievement of modular objectives	3.7
C. Personal objectives attained	4.2
D. Professional associations initiated	4.3
E. Contributions of advisory committee	4.2
F. Contribution to health occupations education	4.5

* N=3

sheets, which were for the most part nonexistant. It was intended that assignment sheets would be developed during the institute, but lack of time prevented their being completed. More direction in the way of specific assignments would probably have increased the effectiveness of discussion and task groups. Staff responses for the module guidelines were in close agreement with those of the participants.

Staff Benefits. An open-ended question followed the objective-type items to afford staff members an opportunity to indicate the ways in which they personally benefited as a result of participation in the institute. All staff unanimously agreed that the institute was a stimulating and rewarding experience. The most commonly mentioned outcome was a greater understanding of health occupations education and the type of individuals employed in the field. All agreed that many provocative ideas for future educational activities and short-term institutes emerged in the process of interaction with participants and other staff. New professional associations were initiated by several staff members with an intention of continuing future relationships.

Recommendations. Following are a number of staff recommendations and suggestions for planning and conducting future short-term institutes.

1. The total staff should be more actively involved in preplanning activities and preparing module guidelines.

2. During preplanning more emphasis should be devoted to identifying covert or subliminal factors, and strategies decided upon for their implementation.

3. More attention should be devoted to establishing a climate conducive to "psychological security" and developing mental and emotional "set" prior to introducing content areas.

4. Discussion session guides and assignment sheets should be developed to provide direction and increase efficiency of work groups.

5. In participant team selections, affective commonalities should be considered as well as cognitive ones.

6. A method should be developed to determine participants' level of competency related to a given content area, and work groups organized based on level of experience.

7. Team teaching should be attempted utilizing a presenter from education and an innovator from a health specialty field to assist in making specific application.

THE FOLLOW-UP ASSESSMENT

PROCEDURES

During the institute, participants were informed that a follow-up assessment would be conducted approximately one year later. They were encouraged to accept the responsibility for completing the questionnaire. The types of questions which would be asked were also mentioned. The follow-up questionnaire (Appendix F) was sent together with a questionnaire to assess the participants' use of the publication "Guidelines and Supportive Papers for Short-Term Teacher Education Activities." These instruments and a cover letter were mailed to the participants on August 14, 1970. Subsequent memos were sent to non-respondents on September 15, 1970, October 9, 1970 and November 19, 1970. Although the initial cover letter was a "form letter," each participant's name was individually written by the project director, and he personally signed each copy. The first of the three memos was duplicated, but personally addressed and signed; the last two were hand written by the project director.

To obtain maximum return it would probably have been advisable to use an instrument on which the participants could have objectively rated statements or responded to a check list. However, to obtain descriptive feedback on each participant's activities related to the institute, it was decided that an open-ended type instrument was necessary. Despite the difficulty in reaching participants one year following the institute and the reluctance of some individuals to respond to any type of questionnaire, particularly this form, a relatively high percent (85.8%) of the participants, 73 of 85, returned questionnaires.

Assessing the true value of an institute is a difficult, if not impossible, task. The on-going assessment described earlier has shown that during, and at the end of the institute, the participants' reactions were quite positive toward the institute. Also, the on-going assessment revealed that some attitude changes had occurred. But would the participants achieve the overall objective of the institute, which was to return home and improve the teaching-learning process in health occupations education programs? The types of activities which the participant had been encouraged to pursue are usually, if not always, the result of numerous inputs. The participants were asked to report on any activities, events or decisions to which the institute made some contribution. Participants were given instructions on how to respond to the questionnaire (Appendix F) and the overall objective of the institute was presented to guide the participants as they responded. The full significance of the institute will never be known, but this report will give some measure of its contributions.

It is unfortunate that there is no way of documenting the enthusiasm shown by the participants throughout the institute, at its conclusion and in the many contacts among the participants and staff since the institute. Exhibited in Appendix G are three letters which are exemplary of the many communications received from participants.

RESULTS

As was expected, the responses were quite varied and it is difficult to present them in a fashion which will be meaningful to the reader as he attempts to judge the value of the institute. The responses to each question are presented in Appendix F. Whenever more than one participant responded in a similar manner this has been noted and some editing has been done to reduce the length of responses. The responses of the participants will be described in general terms and summarized when appropriate. The reader is encouraged to examine the participants' responses (Appendix F) in detail.

Influence on Others

Formal. The first question was designed to ascertain the extent to which participants had conducted, or stimulated others to conduct, formal short-term teacher education activities. They were asked to specify the number and types of activities, content, number of participants and other pertinent information. As the plan for this project called for using a "multiplier approach" to reach large numbers of teachers, the responses to this question are particularly important in measuring the value of the institute. Throughout the institute the participants were encouraged to return home and "spread the word." The Implementation Groups were designed to encourage participants to work together in planning and conducting such activities.

Responses to this question indicate that the institute was highly successful. Because several of the activities reported resulted from the efforts of more than a single participant, there is some duplication in the number of workshops and the number of personnel specified. Review of the responses to this question regarding formally structured teacher education activities indicate that the institute had an affect upon several thousand individuals. It would be presumptuous to assume that none of the activities reported in the responses to this question would have been conducted had it not been for the institute, but from these responses and from communication with the participants it is known that many of the activities were direct outgrowths of the institute, while others were greatly affected by the participants having attended the institute.

It is impossible to know just what type of activity actually occurred from reading statements such as: "attempted to duplicate our course for our teachers," "helped design health occupations education workshop," "conference - 25 new teachers - behavioral objectives," and "short-term institute." It is likely that a number of the activities being planned were never actually held, whereas a simple statement such as "planned short-term institute" may have resulted in some very significant changes being made in a large number of health occupations education teachers. Rather than discuss each of the responses and speculate on what happened, what did occur will be described in a number of the short-term teacher education activities which were reported. It is not intended to infer that these are exemplary of the activities reported; they are those which received greater publicity or were made specifically known to the authors.

During the institute the participants from Utah worked on planning a health occupations teacher education workshop to be conducted at Brigham Young University, Provo, Utah. This institute was conducted June 22, 1970 to July 3, 1970. There were 14 participants at this workshop which was designed to prepare qualified health practitioners for instructional positions in health occupations programs in secondary and post-secondary institutions. The workshop was judged to be a success and future activities are being planned.

A group of participants, and staff member, Lawrence Borosage, from Michigan met during the institute and at later follow-up meetings within their state to prepare a health occupations education workshop. The resultant workshop, held August 3-14, 1970, was co-sponsored by Michigan State University, Ferris State College, Michigan Department of Education, and the Michigan Health Council. This workshop for 20 health occupations education teachers was designed to assist the participants in developing some of the important instructional competencies required of health occupations education teachers. Lawrence Borosage was a guest speaker at the workshop.

Another example of a short-term teacher education activity stimulated by the institute was a workshop entitled "Health Specialists as Teachers" conducted by the Indiana Vocational Technical College, Indiana Hospital Association, Indiana University, Indiana State University and the Department of Public Instruction. An institute participant was general chairman, and staff members, Robert Tomlinson and Lawrence Borosage, were speakers at this two-day workshop for over one hundred individuals.

Two institute participants from Pennsylvania stimulated a number of teacher education activities in that state. A health occupations teacher education workshop was conducted (August 19-25, 1970) by the Department of Vocational Education of Pennsylvania State University in cooperation with the Bureau of Vocational, Technical and Continuing Education of the Pennsylvania Department of Education. This two-week workshop was designed to offer in-service teacher education for health occupations education personnel. In that same state, a series of regional in-service meetings for faculties of practical nursing programs was sponsored by the Health Occupations Section of the Department of Education. These one-day activities, developed by the two institute participants, included learning experiences in classroom teaching, clinical instruction and evaluation.

Project Director, Lewis Holloway, was directly involved as the instructor in three workshops which were stimulated by the institute. The programs for these workshops were developed primarily from the institute guidelines and utilized many of the materials which had been developed for that activity. The first of these workshops was conducted at Kapiolani Community College, Honolulu, Hawaii in conjunction with the University of Hawaii. This workshop, stimulated by an institute participant, was held May 25-29, 1970 and involved 20 individuals from community colleges, hospitals, Regional Medical Program and the Board of Nursing.

The second workshop was held at the University of Georgia in Athens, Georgia from June 20 to July 3, 1970. This activity was jointly sponsored by the University of Georgia and the Georgia State Department of Education. In addition to the general program following the institute format, the classroom testing course which is described and evaluated elsewhere in this document was utilized for the Georgia workshop. Although only 8 individuals enrolled for the full two-week workshop the state supervisor for health occupations education called a statewide meeting for coordinators and instructors during the last two days and an additional 20 participants attended these special sessions.

The third in this series of workshops was held at Marshall University, Huntington, West Virginia, August 3-14, 1970. There were 13 participants in attendance at this workshop which was planned by an institute participant.

Of the 73 participants who returned questionnaires, 57 specified that they had been involved in formally structured short-term teacher education activities of some type. From these responses it seems evident that the institute has had a profound effect upon teacher education activities for the health occupations education field throughout the United States.

Informal. In addition to the formally structured teacher education activities it was anticipated that participants would influence others on an informal basis. The participants were asked about this informal influence and 52 of the 73 questionnaires returned reported evidence of such influence on others (Appendix F). Most of those reporting indicated they had talked with fellow teachers about concepts learned at the institute, while others specified that they had influenced the activities of others in a wide variety of ways. Statements exemplary of these responses include: "influenced teachers across the state to be more aware of teacher shortcomings and to strive for self-improvement," "serving in advisory capacity to health occupations education for local vocational-technical school," "discussing some aspects of learning with my faculty at each meeting," "making health occupations education people, educational administrators, and others more aware of the need for comprehensive health occupations education programs," and "used institute materials in designing a new course." As can be seen by these examples, and a more detailed look at all of the responses, the participants would appear to have had substantial informal influence on others as a result of their participation in the institute.

Change and Approach to Your Role

The participants were asked how they saw themselves acting differently in their approach to planning, conducting and evaluating learning experiences as a result of their participation in the institute. The most common responses (Appendix F) were in the areas of evaluation and planning, and in the use of educational objectives. Additionally, many participants identified specific ways in which they had improved their ability to plan educational programs and their approach to teaching. Instructional strategies and audio-visual aids were mentioned. Of particular note was the number of individuals who appeared to have given thought to the learner-centered approach to education. Exemplary of the responses to this question were: "think and plan in terms of behavioral objectives," "more cognizant of the role of health specialist as a teacher," "give more thought to how individuals learn," "better understanding of teacher training needs and health occupations education," "individualizing instruction to a higher degree," and "students are now asking doubtful questions without hesitations, which gives me a sense of accomplishment." Fifty-six of the 73 respondents indicated ways in which they had changed their approach to their role in terms of planning, conducting and evaluating learning experiences.

Participants were also asked if there were other benefits they had gained from the institute which had helped them in their positions. Most of the responses to this question relate to their having a broader picture of what is happening in health occupations education in areas, regions, or specialties other than their own. The participants stressed the benefits of their being able to share, both formally and informally, with other participants. Examples of these responses were: "found out what is happening in other health occupations education areas;" "increased confidence in my ability to teach;" "more receptive to change and more flexible;" "I found out that our medical professions are truly 'allied' and we should strive to identify our commonalties and eliminate duplications;" "institute could have had influence on my being selected as a Dean;" and "identified potential consultants during the institute."

General

From informal feedback received following the institute it was decided to assess what changes participants had made in their professional plans which might have been facilitated by the institute. As was anticipated a large number indicated that the institute had caused some specific changes in this nature (Appendix F). Eight participants stated that they had started back to school because of the institute, and six specified that it had helped in their decision to accept another position. Others indicated that the institute had been a factor in helping them to do a better job in their present position and to pursue specific areas of interest, such as commitment to curricular change. Forty-two of the 73 respondents answered this question.

In another general question the participants were asked if the institute had influenced their participation in further educational activities of a formal or informal nature. Under the formal aspects they were asked if they had participated in course or degree programs. Although these were asked as separate questions, the responses dealing with courses and degrees were so interrelated that they have been grouped together. It is certainly heartening to learn that some had completed a graduate degree and that the participant attributed this to attendance at the institute. Though the time it takes most individuals to complete academic degrees would seem to negate the possibility that all of those who specified completion of degrees as a direct result of the institute did so, it is relatively certain that the institute did have some influence on individuals pursuing further education. A great many participants specified they had taken specific courses. There were 37 responses to this question.

In addition to the formal aspects of continuing their education it was felt that the institute might have contributed to the participants pursuing informal educational activities. Thirty-nine of the 73 participants stated that the institute had stimulated them to do professional reading. Included in the guideline materials which participants received (Volume II) was an extensive annotated bibliography. Several stated that they had done some reading, others indicated that they had read numerous things, while others listed specific books, articles or journals which they had read. Several simply stated that "they had read everything related that they could get their hands on."

Participants were also asked whether their attendance at the institute had been in any way responsible for their attending other workshops or related activities. Sixteen indicated they had attended the National Health Occupations Education Conference in New Orleans, Louisiana. Because of the large number of individuals who were involved in both the institute and the New Orleans Conference, and because of some similarity in the objectives, it seems appropriate that the Conference and its relationship to the institute be described. Only sixteen participants were in New Orleans for that activity. Additionally, four of the six institute staff members were involved in that conference. The National Health Occupations Education Conference was an invitational activity which was funded by the U.S. Office of Education. The conference director was Robert Tomlinson of the University of Illinois, who had served as co-director of the institute. Over 300 individuals participated in this conference which had as its major objectives to provide a forum where: (1) an exchange of newer developments, approaches and thinking could be conducted; (2) individuals could become acquainted and develop a basis for further exchanges and activities; and (3) an interest in and commitment to further development would be continued following the conference. The Conference included five major papers, reactions to the papers, group discussion on each of the five areas and several additional special presentations. Major papers were given by Lawrence Borosage, an institute staff member, and Elizabeth Kerr, who served as consultant-presenter for the institute. Lewis Holloway, the institute project director, gave a reaction to one of the major papers and served as a discussion group leader. One of the participants, Sandra Noall, was also a reactor. Larry Bailey, assistant director of the institute, served as one of the group discussion leaders, as did eight of the institute participants. Nine of the ten group discussion leaders were staff members or participants from the institute. The extensive input which participants and staff members from the institute made to this conference is one more plaudit for the institute.

The remaining 48 responses to the question on attendance at some type of workshop or similar activity were quite varied.

As another measure of the institute's effectiveness it was deemed appropriate to ascertain to what extent contacts had been maintained among the participants. It was assumed that the sharing which would occur through such contact would be desirable. Of the 73 who returned questionnaires 51 indicated some contact. The largest number of respondees (21) indicated only that they had maintained contact. Ten other individuals specified contact with at least one other individual while others identified contacts with as many as 20 participants whom they did not know prior to the institute.

Early in the institute it was obvious that the participants represented a wide range of philosophies regarding educational programs for health personnel. This was expected due to the varied background and types of programs represented by the participants. In a limited number of cases there may have been a lack of commitment to the preparation of personnel at all levels. Therefore, it seemed appropriate to include a question which would give individuals an opportunity to express themselves relative to their philosophy of education for the health careers. Responses were received from 42 of the 73 returning questionnaires. Several stated strong feelings regarding the need for coordinated efforts and the team approach to health programs. Of particular note are those respondees who stated that their philosophy had changed and that they now see the need for more professionals to embrace a philosophy which includes the preparation of vocational and technical personnel. The reader is strongly encouraged to examine the responses to this question (Appendix F). Statements on the need to develop a more democratic approach; the need to become more occupational training oriented, in preference to the liberal arts approach; and statements of concern for those in the field who are somewhat shortsighted in their views are of particular interest.

Many of the vocational and technical level educators were critical of those functioning at the professional level for not delegating more duties to supportive level health personnel. From the other side, some professional were critical of vocational and technical educators for not seeing the overall problems, for failing to keep an open mind and for not communicating sufficiently with the health professionals. Although there was no formally identified staff of institute philosophy, it was felt that there was need for each level to appreciate the role of others and to work out any problems which seemed to exist. This led to an open examination of many of these concerns and appears to have had a significant affect upon many participants. In their continuing contacts with many of the participants and staff, the authors have found the "Iowa Group" to be very "up-to-date" in their philosophy and approach.

Significant attitudinal changes rarely occur in relatively short periods of time. However, it may be in this area that the institute has made its greatest contribution. The reader will recall that the results of the Role Perception Inventory showed a significant degree of attitudinal change. Responses to the questionnaire verified this modification of behavior. These changes in attitude may be attributed to the degree of openness and the extensive staff-participant and participant-participant interaction which characterized the institute. Presenters spoke to the issues, and there was always lively discussions in both the large groups and in the various small groups. The espirit de corps which developed among the participants, did occur. When individuals make substantial changes in the affective domain it is common for them to identify strongly with others who were a part of the milieu in which this change occurred. This has been the case with the "Iowa Group."

Other

The questionnaires concluded with a question which encouraged the participants to identify any additional activities or factors which might have attributed to the institute. Of the 73 participants who returned questionnaires, 42 responded to this question (Appendix F). Several participants made remarks, primarily positive, about the conduct of the institute. Exemplary of these are: "willingness of participants to share knowledge and know-how impressed me;" "appreciate the utter dedication of those involved in preparing the institute;" "became more knowledgeable of activities in other states;" and "warm personal relationships which developed there." Other comments which seemed to be worthy of particular note are responses which showed a specific attitude change. One participant stated, "It caused a specific attitudinal change. Being a nurse I 'grew up' with state boards and licensure, and resisted the growth of all these ancillary groups (inhalation therapist, etc.). I now see both sides of the coin." Another particularly rewarding statement was, "The institute has directly caused the re-orientation of my college. The Board of Regents (July-1970) approved the initiation of a College of Allied Health Professions." Another stated, "Institute left me with a feeling of unrest and prodded me to set additional objectives for my program and myself."

Staff Follow-Up

Attributing extended activities of the institute staff to their involvement in the institute may be even more risky than with the participants. These individuals regularly have many interactions related to teacher education and to varying degrees with people in the health field. Each staff member was asked to complete the participant follow-up questionnaire, realizing that it would not be directly applicable to them. It was used to stimulate them to provide some type of feedback on activities which were related to the institute. Responses from the staff varied greatly, and one individual stated that he had tried to respond but that his responses were too artificial to be valid.

As was shown several of the staff were involved as staff members or speakers in workshops and conferences which were stimulated and/or conducted by the participants. In addition to those activities reported by the participants, in which staff members were involved, staff members also participated in such activities as: an Illinois Nursing Home Association program; consultation on a curriculum development proposal in Hawaii; and a one-day workshop for radiological technologist in Iowa, all of which were related to the institute.

The project director has utilized many of the materials developed for the institute, the ideas generated by both the staff and participants, and the contacts made through the institute to improve his role as teacher-educator for health occupations education in the State of Iowa. This involves both the short-term teacher education activities and the development of a leadership program in health careers education.

Staff members expressed an increased awareness and understanding of health occupations education and appreciated the exchange of materials and ideas which has assisted them as they relate to both health occupations educators and teacher educators in general. Several staff members also indicated an increased interest, and a desire for, greater involvement in health occupations education. The staff has maintained quite a few contacts with institute participants through the various workshops and association activities.

Larry Bailey co-authored a journal article as a direct result of this institute. The article entitled, "Evaluating Short-Term Education Institutes," by Larry J. Bailey and Keith McNeil appeared in the Journal of Industrial Teacher Education, Summer 1970. It deals with the Role Perception Inventory which was developed for the institute. They describe how it was utilized, the findings and the conclusions derived.

V. THE "GUIDELINES" PUBLICATION

One aspect of this project was the preparation of guidelines to be used in planning and conducting short-term teacher education activities for health occupations education personnel. Preliminary guidelines were developed for use during the institute. Later, the guidelines were revised and published, along with supportive papers developed from the presentations made during the institute, under the title "Guidelines and Supportive Papers for Planning and Conducting Short-Term Teacher Education Activities" (Volume II). This chapter will examine the development of these materials, their distribution and use.

DEVELOPMENT

The guidelines were developed in six modular units with the following titles:

Module I - Supportive Personnel in the Changing Health Industry

Module II - Defining and Describing the Educational Product

Module III - The Learner and Learning

Module IV - Designing Learning Programs

Module V - Evaluation in the Educational Process

Module VI - The Educational Process

Each original module contained educational objectives, instructional strategies, annotated bibliography and supplementary materials. Drawing upon their experience in planning and conducting such activities, the staff pooled their resources in developing the guidelines. The guidelines went through several revisions prior to use during the institute. Each modular unit was duplicated on a different colored paper as a means of rapid identification. During the institute the guidelines for each module were distributed to the participants prior to the beginning session on each unit. The participants were encouraged to examine the materials, and to utilize them to whatever extent possible during the institute learning experiences. References to specific materials in the guidelines were made by the staff members at appropriate points.

Each general presentation during the institute was audio-taped and summaries of the discussion groups were collected to be utilized in preparing the "Guidelines" publication. Following the institute the project director revised the guideline materials, based on feedback from institute participants and staff. The audio-tapes of each general presentation were transcribed, and the type-scripts were edited by the project director. In addition, several of the presenters edited their own papers. The revised guidelines and the supportive papers prepared from the general presentations were subsequently printed in the "Guidelines" publication.

DISTRIBUTION

One copy of the "Guidelines" publication was sent to each institute participant and multiple copies were sent to staff members. Copies were also sent to the consultant-presenters. Each of the 51 "fall-outs" who had been accepted to participate in the institute but were unable to attend also received the publication. The document was sent to each supervisor of health occupations and the head of the Research Coordinating Unit in the Department of Education for each of the 50 states. The program officer for health occupations education in the U.S. Office of Education, Washington, D.C. and those in each of the regional offices were also provided copies. In addition, copies of the "Guidelines" publication were sent to many individuals on mailing lists of personnel interested in health occupations education. Included were individuals in state and university positions, the military services, national associations, and research centers. Copies of the publication were also sent to selected directors, coordinators and instructors in health occupations education programs.

The publication was given visibility through a presentation at the American Vocational Association made by the project director and the co-director in which they described the institute. Additional visibility was given through the consulting activities of the institute staff. The availability of the publication was announced in the "Allied Medical Education Newsletter" of the American Medical Association. Many requests were received from participants and others who wished additional copies. Through the initial mailings and subsequent requests, 756 publications were distributed in time to be included in the follow-up. Additional copies of the publication have been distributed since that time.

EVALUATION

PROCEDURES

The purpose of the "Guidelines" publication was to improve the teaching-learning process in health occupations education programs by providing interested individuals with a document which could be of assistance in planning and conducting teacher education activities. To assess the degree to which the publication was successful in achieving this objective, a questionnaire (Appendix H) was developed and distributed to those who received the "Guidelines." To increase the likelihood of receiving responses, a copy of the questionnaire was enclosed with each document distributed. A cover letter specified that the questionnaire was not to be completed and returned immediately, but rather it was only to be examined before using the document. Though a deadline date of September 15, 1970 was specified for returning the questionnaire, it was not expected that recipients would return the initial copy of the survey instrument. However, it was anticipated that the questionnaire might serve to produce a "mind set" such that the recipient would be willing to complete it, and be better prepared to do so at the appropriate time.

On August 14, 1970, each individual to whom a copy of the publication had been addressed, was sent a second copy of the questionnaire with a cover letter requesting their response. The individual's name, title and address was individually typed on each lithographed letter and it was personally signed by the project director. A copy of the questionnaire was sent to each institute participant along with the institute follow-up questionnaire which was described in Chapter IV.

EXTENT OF UTILIZATION

The first item of the questionnaire (Appendix H) asked the respondents to provide their name, position and their general duties and responsibilities. The number of publications distributed and the number and percentage of questionnaires returned are reported in Table 10. The 85 institute participants responded relatively well as 70 (82.3%) returned their questionnaires. All six of the institute staff members responded. Questionnaires were returned by 240 individuals other than institute participants and staff, most of whom were from the 556 classified as "others." As noted in Table 10, a percentage return for this category is now shown as some of these returns were from those who had received the 109 publications distributed as multiple copies. In such cases a recipient had requested additional publications for distribution. Of the 756 publications distributed to 647 different individuals 316 questionnaires were returned for a return rate of 41.8%. This is considered to be an acceptable rate of return as many who received the publication had not requested it, and others who had requested it may have found that it was not what they had expected. A second mailing to non-respondents was not made.

The second question of the survey instrument asked if the recipient had used the publication. If it had been used, respondees were requested to complete the main portion of the document. Those who indicated the publication had not been used were asked to specify why. Table 11 shows the number and percentage of those who used or did not use the publication, as well as the reasons specified by the non-users. Most of the institute participants (78.6%) who returned the questionnaire had used the "Guidelines." Of the 15 (21.4%) participants who indicated it had not been used, 9 specified the reason was lack of sufficient time. and only 4 responded that it was not appropriate for their use. One of the two sho specified "other" reasons stated that he had just received the publication, apparently there was a delivery problem, and the second stated that he had left the field of health occupations education. Each institute staff member indicated he had used the publication.

TABLE 10

NUMBER OF PUBLICATIONS DISTRIBUTED AND NUMBER AND PERCENTAGE OF PUBLICATION QUESTIONNAIRES RETURNED

Recipients	Number of Recipients	Number of Multiple Copies Distributed	Number of Questionnaires Returned	Percent of Questionnaires Returned
Institute Participants	85	8	70	82.3
Institute Staff	6	29	6	100.0
Others	556	72	240	*
Totals	647	109		
	(647 + 109)	= 756	316	41.8

*No percentage of questionnaires returned is reported for this category, as some of the 240 questionnaires returned were from individuals receiving the multiple copies.

TABLE 11

NUMBER AND PERCENTAGE OF RESPONDENTS
WHO USED OR DID NOT USE THE PUBLICATION
AND THE REASONS SPECIFIED BY NON-USERS

Identifiers		Numbers	Percentages
Institute Participants			
Used publication		55	78.6
Did not use publication		15	21.4
Not appropriate	4		
Insufficient time	9		
Other	2		
		70	100.0
Institute Staff			
Used publication		6	100.0
Did not use publication		0	0.0
		6	100.0
Others			
Used publication		127	52.9
Did not use publication		113	47.1
Not appropriate	20		
Insufficient time	61		
Other	33		
		240	100.0
Total			
Used publication		188	59.5
Did not use publication		128	40.5
Not appropriate	24		
Insufficient time	70		
Other	35		
		316	100.0

Of the wide range of individuals returning questionnaires who were classified as "others," 127 (52.9%) responded they had used the publication. Among the 113 (47.1%) who had not used it, 20 specified that the "Guidelines" was not appropriate for their use and 61 responded that they had not had sufficient time. Examples of the response from the 33 who stated other reasons for not using the publication were: "will use publication in the future"(7); "will be used when appropriate programs are started" (3); "intended recipient referred publication to someone else" (3); and no reason given (3). Within this category there were also eight questionnaires returned on which it was indicated that the publication did not reach the intended recipient.

The totals (Table 11) show that 188 (59.5%) of the 316 respondees had utilized the publication. Twenty-four of the 128 who did not use the publication indicated that it was not appropriate for their use, 70 specified they had insufficient time and 35 identified other reasons.

The total questionnaire return rate was 41.8% and 59.5% of those responding indicated they had utilized the publication. Although this does not show that an impressively high percentage of recipients actually used the document, the feedback (to be discussed later) from the 188 individuals who did use the document was very positive; and 70 of those who had not used it specified insufficient time, many of whom stated that they planned to use it in the future.

The respondees were asked in Item IX to indicate the extent to which the publication was used to benefit individuals in the health field. They were to respond none, somewhat, primarily or entirely. Responses to this question (Table 12) show that those who attended the institute used the material for personnel in the health fields more than the non-participants did. Many of the non-participants were in positions in which they work with a variety of different career fields, whereas most of those selected as institute participants had a more specific relationship to the health field. Although the "Guidelines" publication was designed for those functioning in the health occupations education field, teacher education activities are quite similar in all fields and the document appears to have "transfer " value.

As one sub-set of this question (Item IX) the respondees were asked to indicate the specialties and level of preparation of health personnel with whom they had used the "Guidelines." The institute participants noted 26 different health specialties, or sub-specialties, as compared with 77 for the non-participants. There was little difference between those specified by the two groups. Health specialists listed repeatedly by participants and non-participants were: instructors in health occupations education, general practitioners, inhalation therapists, medical records technicians, medical technologists, x-ray technicians, dental assistants, and nurses at all levels. Specialties which were listed by one or two individuals included: medical school faculty members, dentists, surgical technicians, dietitians, and hospital administrators. The institute staff listings were very similar.

TABLE 12

EXTENT OF USE OF PUBLICATION WITH INDIVIDUALS IN THE HEALTH FIELD BY INSTITUTE PARTICIPANTS, NON-PARTICIPANTS AND STAFF

Extent of Use	Participants	Non-Participants	Staff
None	0 (0.0%)	12 (11.2%)	1 (16.7%)
Somewhat	11 (23.9%)	37 (34.6%)	2 (33.3%)
Primarily	21 (45.7%)	32 (29.9%)	3 (50.0%)
Entirely	14 (30.5%)	26 (24.3%)	
Total	46 (100%)	107 (100%)	6 (100%)

Also, under this same question respondees were asked to indicate what groups other than health occupations education personnel were influenced by the publication. Institute participants identified 10 different groups and non-participants specified 35. Examples of those listed by participants and non-participants were: administrators, trade and industry teachers, other vocational educators, liberal arts faculty, educators, chemists, mathematicians, high school counselors, curriculum specialists, advisory counsel and law-enforcement educators. Responses to this question indicate that the publication has been used to serve a wide range of personnel in the health fields and in many other areas of education.

In Item V the respondees were asked to estimate the number of teachers who had been influenced by the document, through formal or informal means. The responses from institute participants ranged from zero to 200 with a mean number of teachers influenced of 37. Institute participants estimated that they had influenced a total of 1,913 teachers through use of the publication. The number of teachers influenced by the publication reported by non-participant respondees ranged from zero to 1,000, with a mean of 23, and a total of 1,907. The report of a non-participant using the publication to influence 1,000 teachers seemed conspicuously high so that particular questionnaire was examined. The project director personally knows the individual and she does run workshops for large groups, primarily nurses. From all indications she was genuinely impressed with, and influenced by, the "Guidelines." The question which might be raised would be whether the 1,000 individuals influenced were all teachers; many were probably staff nurses. The institute staff reported a range of from 10 to 500 teachers influenced for a total of 832 and a mean number influenced by each staff member of 138. If no teachers were common among those estimated by the various individuals, the total number of teachers influenced would have been 5,653. Even though this may be a somewhat inflated figure it would appear that the "Guidelines" publication has had a significant affect upon teacher education activities.

The questionnaire also asked respondees to describe any future plans in which they expected to use the publication (Item VI). The most common responses from the institute participants were that it would be used as a reference, as an input for curriculum change, for writing behavioral objectives for new courses, as an aid for teacher-training programs and workshops, for self-improvement as a teacher, and for in-service teacher education programs. Similar responses were given by non-participants with the highest figures being the areas of in-service workshops or programs (21) reference and resource materials (28) and for sharing with other health occupations personnel (10). Institute staff responses were similar.

MANNER OF UTILIZATION

Two questionnaire items (Appendix H) were designed to assess how the "Guidelines" publication had been used. In Item III respondees were asked to indicate in what way(s) the publication had been used: (1) to improve their own teaching; (2) to improve the teaching of others; or (3) other (please specify). Responses could be made to any, or all three, of the statements. They were also asked to describe how the publication was used to accomplish 1, 2, and/or 3. From examining the responses to this question (Table 13) it appears that the only difference between the three groups was that fewer of the institute participants used the document for "other" reasons. The largest percentage in each group used the document to improve the teaching of others, which was the purpose for which it was developed. A wide variety of responses were given to the open-ended section of this question by all three groups. These included: as reference in thesis or dissertation, in curriculum development, as a resource document for presentations, as basis for evaluating prospective health occupations education courses, for review information and/or reference, conducting a conference, to develop a health occupations education teacher education program, for evaluating continuing education programs and to revise grading methods.

Item IV asked which of four specific roles the publication had served, or asked the respondee to specify other roles as appropriate. As shown in Table 14 the responses were rather evenly distributed between the four specified alternatives. It appears that the publication has served as a tool for both self-improvement and for assisting others. The evenness of the distribution would suggest that the document is versatile enough to be used in several different ways. There were no substantial differences between the institute participants and non-participants. Some differences appear to exist for staff members, but on inspection they are quite understandable based upon their

TABLE 13

USES MADE OF PUBLICATION BY INSTITUTE PARTICIPANTS, NON-PARTICIPANTS AND STAFF

Use	Participants	Non-Participants	Staff
To improve your teaching	30 (34.1%)	55 (31.4%)	4 (33.3%)
To improve the teaching of others	42 (47.7%)	70 (40.0%)	5 (41.7%)
Other	16 (18.2%)	50 (28.6%)	3 (25.0%)
Total	88 (100%)	175 (100%)	12 (100%)

TABLE 14

ROLES WHICH THE PUBLICATION SERVED FOR INSTITUTE PARTICIPANTS, NON-PARTICIPANTS AND STAFF

Roles	Participants	Non-Participants	Staff
1. As a resource for self-improvement -- read or studied as a total package	29 (25.0%)	64 (25.0%)	2 (15.4%)
2. As a resource for self-improvement -- selected items of interest	32 (27.6%)	80 (31.3%)	6 (46.1%)
3. As the basic stimulant to planning and conducting short-term activities for improving the teaching of others	28 (24.2%)	60 (23.4%)	2 (15.4%)
4. As a supplement to planned activities -- not stimulated by the publication	21 (18.0%)	46 (18.0%)	3 (23.1%)
5. Other (please specify)	6 (5.2%)	6 (2.3%)	0 (0.0%)
Total	116 (100%)	256 (100%)	13 (100%)

positions as teacher educators. Examples of the responses made to (5) "Other" are: as a stimulator of interest and awareness of the needs for educational techniques by health professionals, as a resource for self-improvement, an excellent in-service device since most of our teachers do not have adequate pedagogical backgrounds, general information source, and a stimulant to planning and building graduate courses.

CONTENT AND FORMAT

Several questions were designed to measure whether the content and format of the document were appropriate. Item V asked that the respondees rate each of the modular units on a five-point scale with a range of 5 (excellent) to 1 (poor). The mean scores for the ratings by participant, non-participants and staff are shown on Table 15. There was little difference in the mean ratings across the various modules. It appears that each of the modules was well-received. There were no substantial differences between the responses of participants and non-participants, though the staff ratings varied slightly from the others. The questionnaire also solicited comments about the modular units. Sixteen of the participants and 51 of the non-participants took the opportunity to do so. Examples of the comments made by participants were: each unit has in some way been used to strengthen new or existing health occupations education programs; the whole book was super -- worth as much as the institute; Unit 4 was outstanding; Unit 5 did not meet needs in terms of learning, but it was a good review; units are without exception excellent; and papers were all up to date and quite inclusive. Among the comments made by non-participants were the following: excellent resource for department heads -- readable and helpful, well-designed and well-documented; article on role of the health specialists as a teacher especially excellent; best compilation of thinking on teaching-learning process in the area of health occupations education; much needed reference; Unit 4 very useful, but it did not meet its objectives; somewhat disappointed in Unit 6, but it was well-written; all excellent, should provide practical material for teachers and administrators to use; Unit 2 -- too wordy; plan to use Unit 4 in faculty in-service program; and the main missing component was the area of interpersonal relationships. As can be seen by these comments and the high ratings on Table 15, each unit can be considered to have been very helpful to personnel in the field, though improvements would need to be made in a revision or in future documents of this type.

Respondees were also asked to rate the specific parts of the publication with respect to how well they had met the reader's need (Item VI). On the 5 (excellent)to 1 (poor) scale they were to rate the value of the educational objectives, instructional strategies, annotated bibliographies, supplementary materials and the supportive papers. Table 16 presents the mean rankings for the responses to this question. Once again the data show that the respondees had very positive feelings about each of the various segments of the modules. There were no differences between the means of the participants and non-participants. The staff saw the annotated bibliographies, supplementary materials and

TABLE 15

RATINGS* ON THE DEGREE TO WHICH THE MODULAR UNITS MET THE NEEDS OF INSTITUTE PARTICIPANTS, NON-PARTICIPANTS AND STAFF

Unit	Participants[1]	Non Participants[2]	Staff
1. Supportive Personnel in the Changing Health Industry	3.98	3.93	4.50
2. Defining and Describing the Educational Product	4.16	4.17	4.33
3. The Learner and Learning	4.20	4.21	3.83
4. Designing Learning Programs	4.08	4.20	3.83
5. Evaluation in the Educational Process	3.92	4.08	3.66
6. The Educational Process	3.94	3.88	4.00
Mean of the Means	4.05	4.07	4.02

*Means scores for each module based on a five point rating scale with values of 5 for excellent and 1 for poor.

[1] - N = 51
[2] - N - 107
[3] - N = 6

supportive papers as slightly better than the participants and non-participants, and they saw the educational objectives and instructional strategies as not quite as helpful. Among the comments made by institute participants were: bibliographies have been especially helpful; educational objectives, instructional strategies were outstanding; like the practical suggestions in the supportive papers; educational objectives were of great help; liked having the full papers presented, my own notes aren't that good. Examples of comments by non-participants were: good resource document; supportive papers most helpful; annotated bibliographies most helpful; a pedagogical masterpiece!; all parts met my needs at various times; used instructional strategies the most; liked format of the educational objectives; all parts were well-presented and used; particularly interested in manner of establishing objectives and supporting these by the use of the other four aspects; needed more "how to" materials rather than so many papers; instructional strategies were practical and logically organized; I am very down on high-flown

TABLE 16

RATINGS* ON THE DEGREE TO WHICH SPECIFIC PORTIONS OF THE PUBLICATIONS MET THE NEEDS OF INSTITUTE PARTICIPANTS, NON-PARTICIPANTS AND STAFF

Portion	Participants[1]	Non-Participants[2]	Staff[3]
Educational Objectives	4.18	4.14	3.83
Instructional Strategies	4.00	4.08	3.66
Annotated Bibliographies	4.10	4.10	4.50
Supplementary Materials	4.02	3.94	4.50
Supportive Papers	4.19	4.11	4.33
Mean of the Means	4.10	4.07	

*Means scores for each module based on a five point rating scale with values of 5 for excellent and 1 for poor.

[1] - N = 49
[2] - N = 110
[3] - N = 6

theoretical models -- your publication is directed toward practical methods and workable tools; enjoyed the "light" supplemental materials to reinforce ideas presented; unusually good collection and I needed them all -- publication brought "education" to life, always steered clear of education courses before.

Item VII (Appendix H) asked for suggestions of other material which should have been included in a publication of this type. Eleven of the institute participants specified that no other material was necessary. Other participants suggested: the organization, structure and implementation of a teacher education plan; use of the multi-media approach to individualized instruction; a small picture of each presenter; and examples of various types of lesson plans. Seventeen of the non-participants indicated there was no need for additional kinds of material. Suggestions were made by non-participants for: specific material dealing with emerging professions; articles from specific institutions which conduct pilot programs; identification of all areas in the health care industry; audio-visual suggestions; definitions of role and functions; the role of the consultant in working with health occupations education personnel; better cross-index for content; more detailed table of contents; standards for teacher evaluation; and data and norms on student selection. Several commented that the document was quite satisfactory as it presently exists.

Additional suggestions for improving the form or construction of the publication were asked for in Item VIII. Twenty-two institute participants specified there was no need for change as did twenty-one of the non-participants. Suggestions for possible change included: the need for case studies of departmental objectives; the table of contents should have been more detailed; re-numbering of pages beginning with each modular unit; more use of graphics; some parts too wordy; more specific information relative to the health fields; too many overly-sentimental sections; a variety of type style would make for easier readings; and this is a gem of a "package" which humanizes and brings to life the "education process" (too long, stereotyped in a bad mold).

From all indications the "Guidelines" publication has served a meaningful role in facilitating the objective of improving the teaching-learning process. Though improvements might well be made, no portion or aspect of the document was severely criticized.

VI. THE IN-SERVICE EDUCATION COURSE

Since the overall objective of this project was to stimulate individuals to conduct short-term teacher education activities, the project director felt it was appropriate, if not essential, that he should "model" this type of behavior. Although he regularly conducts short-term teacher education activities it was important that whatever was developed be specifically related to the institute. There had been fewer than the 100 stipended institute participants for whom monies had been budgeted, so an amendment was submitted to the U. S. Office of Education for a transfer of monies between budget categories. The amendment was approved for the development of a model in-service teacher education program.

PLANNING

The overall plan for the activity included the development of the course; pilot administrations; evaluations of the pilots; revisions as appropriate; continued offerings within the State of Iowa, upon request; and making the materials developed available to interested parties.

The first step in the planning activities for the program was to ascertain which of the major topics from the "Guidelines" publication were of primary interest to potential participants of an in-service teacher education course. Two community colleges in Iowa which offer multiple programs in health occupations education were contacted to assess their interest in an in-service teacher education course. Both colleges expressed their willingness, and a meeting was arranged to discuss the project and to survey their specific interests. A survey instrument (Appendix I) was used to ascertain the faculty members' preferences for topics. The topics ranking highest in interest were: 3.2, Selecting and Using Instructional Strategies; 2.1, Factors and Concepts Affecting Learning; and 4.2, Measuring and Evaluating Learning Achievement. Although 4.2, Measuring and Evaluating Learning Achievement ranked third in the combined rank ordering of the two colleges, it was chosen as the topic for the in-service education course. This decision was based on the availability of materials; the adaptability of the topic to a variety of instructional strategies; and because learning experiences on this topic were not readily available to instructional personnel in the community colleges through extension courses, as was the case with the other two topics.

Once the topic had been selected, the project director and a graduate student, James McCord, began the long process of preparing educational objectives. The objectives, which had been specified in Modular Unit 5 of the "Guidelines" publication, (Volume II) were refined and greatly expanded for the in-service teacher education course. The general objectives for the course, which were included as a visual in the first lesson, are presented in Appendix I. The number 5 in the designator 5.01, used on the course materials, designates Module 5 from the "Guidelines." The .01 was a modification in the original taxonomy numbering system. Using the hierarchy of educational objective approach, specific objectives were detailed under each of the general objectives. The appropriate specific objectives were presented to the student at the onset of each lesson.

Having completed the educational objectives the staff examined them to ascertain how they might best be organized and sequenced into lessons, and what learning strategies would be appropriate. Several learning strategies were selected to accommodate the types of participants; to best meet the objectives; and to demonstrate the kinds of strategies which had been described and encouraged during the institute, and in the "Guidelines" publication. The course was designed primarily as an extension activity rather than as an experimental study to compare instructional strategies or various approaches to in-service teacher education.

In surveying the two community colleges to assess their interest in short-term teacher education activities it was found they were receptive to a course which was partially in "packaged" form. It was felt that many of the educational objectives were achievable through the use of learning packages, and that by experiencing such activities teachers might be encouraged to consider the use of this type of strategy in their own teaching. Also, with such a system, instructor time during the actual lessons would be reduced; though it was recognized that the initial preparation of the learning packages would be quite time consuming.

A list of the sixteen lessons, and the instructional strategies used, is shown in Appendix J. Lessons 0 and 1 were covered in a single presentation, whereas each of the other lessons was an independent activity. For each lesson, educational objectives and other visuals were distributed to the participants. Examples of the worksheets, visuals and other materials used for each of the different types of strategies are presented in Appendix J. A complete set of the printed materials developed for the in-service teacher education course, "Measuring and Evaluating Learning Achievement," is available for $3.20, prepaid, from: Program in Health Occupations Education, Division of Health Affairs, the University of Iowa, 135 Melrose Avenue, Iowa City, Iowa 52240.

General presentations were primarily lecture-discussions. The original tutorial packages were audio-tutorial packages and utilized worksheets, audio-tapes, visuals, and the textbook,[1] which was used with all lessons. On the follow-up evaluation of the first pilot administration several individuals specified that there were problems in having audio-tape recorders available for the audio-tutorial packages, and some indicated they would have preferred to have read all their material. Therefore, for each of the audio-tutorial packages a corresponding text-type tutorial package was developed. The material which had been on the audio-tape recordings was provided in text form along with the worksheet materials (Appendix J). This alternative form of the tutorial packages was made available to the participants for the third pilot administration. The use and acceptance of this format will be discussed at a later point.

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[1] Gronlund, Norman E., Constructing Achievement Tests. Englewood Cliffs, New Jersey: Prentice Hall Inc., 1968.

Self-directed learning packages were used for two lessons. With this format the participant was provided the educational objectives to be achieved, instructional materials and resources, and some suggested criteria for self-evaluation. This strategy provided the participants with the least amount of direction as they were required to take the primary responsibility for their own learning.

Each participant was expected to develop a test as a project for the course. In most cases participants were able to prepare tests appropriate for use with an on-going class for which they were responsible. The one-to-one, instructor-participant, conference sessions allowed for clarification of concerns or questions which the individuals had in the development of their test projects. One such conference was scheduled when the participants were working on the preparatory procedures for their test projects and another during the actual item writing stage. Each one-to-one session was approximately 45 minutes long which required a considerable amount of instructor time.

For Lesson 10 a "test" was designed as a learning experience. The participants were asked to judge whether a series of questions were good or poor, and if the questions were poor, they were to specify what was wrong with them. After the "test" experience the group discussed each of the items, and testing in general.

Lesson 16, the final activity, varied for each of the three pilot administrations. The pre-and-post-tests were not available for the first two course offerings. For these administrations the final experience included the completion of the course evaluation and the opinionnaire instrument and a general discussion of the course. In the third pilot the participants took a post-test, completed the course evaluation and opinionnaire, and discussed specific aspects of the course. Arrangements were made so that participants were able to earn college credit for the course if they wished to do so.

THE PILOT ADMINISTRATIONS

It had been planned to conduct the in-service teacher education course for both of the community colleges who had participated in the initial survey. However, problems occurred, and one of the institutions did not participate. The first pilot was conducted for the health occupations education staff at Kirkwood Community College in Cedar Rapids, Iowa. The activity began on March 11, 1970, and was concluded on May 20, 1970. As with the first offering of many courses numerous problems occurred. The major difficulty was the scheduling of a day when all of the participants could be available for the general presentations and one-to-one sessions. This might have been alleviated at another time during the school year, had more time been available for planning. Because all of the materials for the course were not completed on schedule, it was necessary to delay the first lesson. As a result the twelve weeks which originally had been anticipated, were reduced to only nine weeks. In spite of these problems it was felt that the course was successful, as will be described in the section on evaluation.

The project director served as the primary instructor for the initial offering of the course with the graduate assistant preparing many of the materials, taking the major responsibility for selected instructional packages and giving one of the general presentations. Thirteen participants completed the first pilot administration, twelve of whom were enrolled for course credit. Several others were initially involved in the course, but other duties prevented them from completing it.

The second offering of the course was presented as part of a teacher education workshop which the project director conducted at Athens, Georgia. This workshop (June 15-26, 1970) was co-sponsored by the University of Georgia and the Georgia State Department of Education. During this two-week Health Occupations Education Teacher Education Workshop the participants spent each afternoon on the classroom testing course. The project director worked with the participants on other teacher education activities during the mornings, as was described in Chapter IV. The course content was the same for this second offering, but the format was much different. In most instances two lessons, one "live" and one "packaged" were covered each afternoon. The eight participants were able to complete each of the packages and under much more controlled conditions than during the first administration. The instructor was available for clarification when learning packages were used, though his presence was rarely called for. There were advantages and disadvantages to this format which will be described in the following section on evaluation.

The in-service teacher education course was conducted for a third time at the Eastern Iowa Community College District, as a cooperative venture between the Scott Community College Campus, Davenport, Iowa and the Clinton Community College Campus, Clinton, Iowa. It was held from February 2, 1971, through May 11, 1971, and 17 individuals enrolled, 16 of whom completed the course. The format for the course was quite similar to that used in the first pilot, though it was conducted over a fourteen week period, as compared with nine weeks for the initial offering. Adequate time for planning and organization was available and it was possible to alleviate most of the problems which occurred during the initial offering. Attendance at all live sessions was very good. A pre-post test was developed and utilized during the third administration. This was also the first time the text-type tutorial packages were used and an evaluation of them will be reported. Each administration appears to have been successful, but it is felt that the course was improved with each successive offering.

EVALUATION

The evaluation activities for the in-service teacher education course were designed primarily to ascertain the general effectiveness of the course and to obtain specific information on the formats and the instructional materials used. The evaluation activities have provided summative data to ascertain the value of the course and formative information for improvement of the activity.

PROCEDURES

Data for evaluating the courses were obtained by using the opinionnaire and evaluation instrument which is shown in Appendix K. Additionally, for the third pilot administration a one page addition (Appendix K) was used to assess the value of the text-type tutorial packages which were used with that administration. The participants were asked to sign the opinionnaire for administrative purposes only and were assured that neither their grades nor their personal relationship with the instructor would be affected by their reactions. There was no evidence of concern by the participants in this regard. In some instances reports of personal interactions with the participants will be included.

Since there were differences in the administrative formats for each of the three pilot administrations some comparisons will be made between them. However, the groups were very small and there were multiple uncontrolled variables, so statistical comparisons will be limited. Descriptive statistics will be presented, and similarities and substantial differences will be noted.

RESULTS

Data gathered on the first twenty-five "basic statements" items for each of the pilot administrations are shown in Table 17. This table will be used in comparing the three pilot administrations, but before making comparisons a general assessment regarding the value of the course, reactions to selected administrative factors, and the participants' opinions about the various instructional strategies will be examined. The mean scores (Table 17) were computed by assigning the numbers one through five to the responses strongly agree through strongly disagree.

General Assessment

Several of the 25 basic statements were designed to measure the participants' general reactions regarding the value of the in-service teacher education course. Item 11, "I learned very little from this activity," received ratings between disagree and strongly disagree

TABLE 17

RATING TALLIES AND MEANS OF
PARTICIPANTS' RESPONSES TO
GENERAL ITEMS ON THE IN-SERVICE COURSE
OPINIONNAIRE AND EVALUATION INSTRUMENT

Item		Tallies					Mean
		SA	A	N	D	SD	
Numerical Rating		1	2	3	4	5	
1. I would have preferred to have had only "live" lessons.	A	5	4	2	5	2	2.72
	B	0	1	1	1	5	4.25
	C	3	2	1	5	5	3.44
2. Nine weeks was too short a period in which to learn the contents of this course.	A	3	5	2	4	4	3.05
	B	3	5	0	0	0	1.62
	C	3	6	2	4	1	2.63
3. The packaged lessons were easy to work with.	A	4	7	4	1	2	2.44
	B	3	5	0	0	0	1.62
	C	8	6	1	0	0	1.53
4. I would have preferred to have had evening meetings rather than to have been so rushed.	A	3	5	3	4	3	2.94
	B	1	2	2	2	1	3.00
	C	6	2	1	3	4	2.81
5. Topics were scheduled in an appropriate sequence.	A	4	11	2	1	0	1.88
	B	4	4	0	0	0	1.50
	C	8	5	1	2	0	1.81
6. A greater proportion of time should have been spent in general presentations.	A	4	3	3	8	0	2.83
	B	0	0	1	5	2	4.12
	C	1	4	3	6	2	3.25
7. The instructional staff was too inaccessible for individual attention.	A	3	3	4	4	4	3.16
	B	0	0	0	3	5	4.62
	C	0	1	4	7	4	3.88
8. In general, the program was well organized.	A	8	8	2	0	0	1.60
	B	6	2	0	0	0	1.25
	C	9	6	1	0	0	1.50
9. A greater proportion of time should have been spent in one-to-one sessions.	A	2	3	4	8	1	3.16
	B	0	1	3	3	1	3.50
	C	1	4	4	7	0	3.06

Item	Numerical Rating	Tallies					Mean
		SA	A	N	D	SD	
10. I think inadequate provisions were made for individual differences.	A	3	1	8	4	2	3.05
	B	1	1	1	4	1	3.37
	C	0	3	3	8	2	3.56
11. I learned very little from this activity.	A	0	1	1	10	6	4.16
	B	0	0	0	1	7	4.87
	C	0	0	1	3	12	4.69
12. For a better balance between live and packaged lessons there should have been more packaged lessons.	A	0	1	4	5	8	4.11
	B	0	0	0	6	2	4.25
	C	0	0	3	11	2	3.94
13. I would take the opportunity to participate in an activity of this nature again if it were offered.	A	7	7	4	0	0	1.83
	B	5	3	0	0	0	1.37
	C	5	8	1	2	0	2.00
14. General presentations were too long to sit and listen or to take notes.	A	0	4	2	5	7	3.83
	B	0	0	0	7	1	4.12
	C	0	0	4	5	6	3.88
15. The course content pre-supposed far more training than I had.	A	1	4	4	6	3	3.33
	B	0	0	0	8	0	4.00
	C	3	4	3	6	0	2.75
16. The lessons were stimulating and interesting.	A	5	5	5	0	0	2.00
	B	5	3	0	0	0	1.37
	C	7	9	1	0	0	1.75
17. I was satisfied with the topic chosen for this in-service training project.	A	9	8	1	0	0	1.55
	B	6	2	0	0	0	1.75
	C	7	8	0	1	0	1.69
18. The presenters were well prepared.	A	10	7	1	0	0	1.50
	B	7	1	0	0	0	1.25
	C	8	7	1	0	0	1.56
19. I expect to be able to apply the content which was presented in this course.	A	9	8	1	0	0	1.55
	B	5	3	0	0	0	1.37
	C	11	5	0	0	0	1.31
20. The information presented was too elementary.	A	0	1	3	8	6	4.05
	B	0	0	0	7	1	4.12
	C	0	0	1	2	13	4.75

Item			Tallies					Mean
	Numerical Rating		SA 1	A 2	N 3	D 4	SD 5	
21.	I was stimulated to think objectively about the topics presented.	A	5	13	0	0	0	1.72
		B	3	5	0	0	0	1.62
		C	3	6	1	1	0	1.69
22.	Too much jargon was used in the lessons.	A	1	1	9	5	2	3.33
		B	0	0	1	5	2	4.12
		C	0	1	4	5	6	4.00
23.	Too much emphasis was placed on topics that are unimportant.	A	0	1	2	9	6	4.11
		B	0	0	0	4	4	4.50
		C	0	0	3	7	6	4.19
24.	The presentation of the content material was paced too fast.	A	2	3	3	6	4	3.38
		B	0	3	1	4	0	3.12
		C	2	2	2	9	1	3.31
25.	I was pleased with the teaching methods used for the course.	A	4	6	2	4	2	2.66
		B	5	3	0	0	0	1.37
		C	5	7	3	1	0	2.00

A. Kirkwood Community College, Cedar Rapids, Iowa.

B. University of Georgia, Athens, Georgia.

C. Eastern Iowa Community College, Scott Campus, Davenport, and Clinton Campus, Clinton, Iowa.

for all three pilot administrations. The means of 4.16, 4.87, and 4.69 (Table 17) represent stronger feelings than that expressed on any of the other 25 items. This is an indication that the participants saw the course as being generally successful. A second measure of success is shown by Item 13 in which the respondees reacted to the possibility of participating in a similar activity of this nature, if it were to be offered. The mean values for this item ranged from agree to strongly agree. Another such general measure is Item 19 in which participants were asked whether they expected to be able to apply the content of this course. The means for each of the three groups fell between agree and strongly agree.

Item 15 asked whether the course content pre-supposed far more training than they had. It can be seen that participants in pilot administrations A and C were approximately neutral, and those in administration B were in disagreement. This comparison will be described in a later section, as will other differences between the groups. It is assumed that some participants did experience difficulties arising from lack of previous teacher education activities, but this was not a major deterrent to their learning. There was also general agreement on Item 16 that, "The lessons were stimulating and interesting," with the responses ranging from agree to strongly agree. Responses to Item 17 show that the participants were satisfied with the topic for the in-service teacher education.

The mean responses for each of the pilots on Item 18 show that the participants were satisfied with the preparation of the instructors; a factor reflecting general satisfaction with the course. From the mean responses to Item 20 it is concluded that the information presented was not seen by the participants as being too elementary. A similar type of statement, Item 23, asked the respondents whether too much emphasis was placed on topics that were unimportant. Responses to this item ranged from disagree to strongly disagree. The responses to Item 22 show that the participants did not feel that an excessive amount of jargon was used during the lessons.

As an additional means to measure the general value of the course, participants were asked to express an opinion of their degree of familiarity with the six main topics covered in the course (Appendix J, Page 3). Table 18 presents the tallies and means for each of the three pilot administrations on this familiarity ranking. The mean of the means for Groups A, B and C were 3.87, 4.13 and 3.80 respectively. These relatively high rankings indicate that overall, the participants felt familiar with the topics at the end of the course. It is interesting to note that for each pilot the mean scores become progressively lower from Topic 1 to Topic 6. Several factors probably contributed to this variance. Discussions with the participants and the author's past experiences with the topics verified that Topics 5 and 6, Scoring and Appraising Tests, and Treating Test Scores and Assigning Grades are those with which the participants were least familiar at the onset of the course. Another factor contributing to the lower ratings on the Topics 5 and 6 is the amount of time spent on them related to their degree of difficulty. In further revisions of the course it would be desirable to extend the time spent on these topics. Verification of this need is found in the responses to the open-end question which followed the ratings on familiarity. In response to the question, "Is there any topic or specific lesson on which you would like to give us additional feedback, either positive or negative?" several specified the need for more time and depth on the last lessons.

Administrative Factors

Among the initial 25 basic statements participants were asked to respond to a number of statements regarding the administration of the course (Table 17). In Item 2 they were asked their reaction to covering ing the course in a designated period of time. This was nine weeks for Pilot A, two weeks for Pilot B, and fourteen weeks for Pilot C. Group A was about equally divided on the matter of the length of time, with a mean rating of 3.05. The participants of Pilot B, which utilized the short concentrated approach, agreed that there was insufficient time. Participants' reaction to the third administration (Pilot C) of fourteen weeks showed a wide distribution, with a slight tendency to agree. Although it is difficult to bring about extensive behavioral changes in a two week period, Pilot B, the instructor's opinion and the responses of the participants on various segments of the evaluation instrument indicate that the second pilot was quite successful. With the concentrated approach the participants do not have other distracting commitments as they do when they are taking a course in addition to teaching their regular classes.

The participants for all three groups were rather evenly divided on the possibility of holding evening meetings, Item 4. Of course, this meant something entirely different for the second pilot administration (Group B) because of the different approach to the course. Responses to Item 7 regarding the inaccessibility of the instructional staff for individual attention showed general disagreement. As would be expected, the second group of participants, Group B, disagreed more strongly as the instructor was available to them as they utilized the packaged materials. During the initial orientation session with Groups A and C, the instructor made every effort to encourage the participants to contact him by telephone as well as by means of a prepared memo. These two groups made little use of these methods of interacting with the instructor, though there was somewhat more interaction in the third pilot, probably because the instructor stressed this possibility to a greater extent. In response to Item 21 the participants indicated that they saw themselves as being stimulated to think objectively about each of the topics presented.

TABLE 18

RATING TALLIES AND MEANS OF PARTICIPANTS' RESPONSES TO FAMILIARITY WITH COURSE TOPICS

Formats		Rating					Mean
		Very Familiar			Not Familiar		
		5	4	3	2	1	
1. The purpose for measuring achievement.	A	10	6	2	0	0	4.44
	B	7	0	0	1	0	4.67
	C	10	5	1	0	0	4.56
2. Preparatory procedures for developing tests.	A	6	6	6	0	0	4.02
	B	5	2	1	0	0	4.50
	C	10	3	2	1	0	4.38
3. Writing test items.	A	4	11	3	0	0	4.05
	B	2	6	0	0	0	4.25
	C	4	10	2	0	0	4.13
4. Assembling and administering tests.	A	7	5	6	0	0	4.05
	B	4	4	0	0	0	4.50
	C	5	7	3	1	0	4.00
5. Scoring and appraising test items.	A	3	2	12	1	0	3.39
	B	0	6	2	0	0	3.75
	C	0	5	7	4	0	3.06
6. Treating test scores and assigning grades.	A	2	2	13	1	0	3.28
	B	0	3	3	2	0	3.13
	C	0	2	8	5	1	2.69
Mean of the means	A						3.87
	B						4.13
	C						3.80

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Instructional Strategies

Since there were a number of different strategies used for this course it was appropriate that the participant's degree of satisfaction with the various strategies should be assessed. Item 1 (Appendix J) asked whether the participants would have preferred to have had only "live" lessons. Participants of the first administration were about equally divided on this question (Table 17) whereas those of the second administration tended to disagree, as did many of the participants in the third group. These positions are verified by similar responses to Item 6 regarding the possibility of a greater portion of time which might have been spent in general presentations. Also related to this same issue, Item 12 asked whether there should have been more "packaged" lessons. There was general disagreement with the possibility of more "packaged" lessons. Although there was variation between individuals, it is concluded that the mixture of "live" to "packaged" lessons was about right. All three groups disagreed with Item 14 which suggested that the general presentations were too long. Furthermore, the responses to Item 20 indicate that the information was not too elementary and the data on Item 24 show that it was not presented at too fast a rate.

The mean responses of each of the three groups to Item 8 indicate that, in general, the participants thought the program was well organized. Participants from each of the three groups were neutral to slightly in disagreement with the statement that more time should have been spent in one-to-one sessions, Item 9. Responses to Item 5 indicate that generally the participants agreed that topics were scheduled in an appropriate sequence. In responding to Item 3 the participants indicated that the packaged lessons were easy to work with.

Although the staff was cognizant of the need to account for individual differences, they were aware that this had been provided the variation in the pace at which the participants were able to work on some of the lessons, and in their individual test projects. This was reflected by the responses of participants to Item 10 which showed that the groups varied from being about equally distributed on this item, to in slight disagreement. The responses to Item 25 indicate that generally, the participants were pleased with the teaching methods used for the course.

As another measure of the various instructional strategies, the participants were asked to rate the effectiveness of each on a five point scale (Appendix J). Table 19 shows the tallies and means for each of the three groups of participants. Overall the participants found each of the strategies were not to their liking. Differences between the various groups will be discussed later. In addition to the objective ratings on the various strategies there was an open ended question which stated, "Is there any additional feedback you would like to give us regarding the various instructional formats which were used in this course?" Few of the participants responded to this question, but those who did were favorable to either specific

TABLE 19

RATING TALLIES AND MEANS OF PARTICIPANTS' RESPONSES TO EFFECTIVENESS OF INSTRUCTIONAL STRATEGIES USED

Strategies		Rating					Mean
		Very Effective				Not Effective	
		5	4	3	2	1	
1. General presentations.	A	9	5	3	0	0	4.35
	B	7	1	0	0	0	4.85
	C	8	7	1	0	0	4.44
2. Packaged, with tapes.	A	4	7	5	1	0	3.82
	B	5	3	0	0	0	4.63
	C	1	5	3	2	1	3.25
3. Packaged, without tapes.	A	4	3	5	3	1	3.47
	B	2	5	1	0	0	4.13
	C	10	5	1	0	0	4.56
4. One-to-one discussions.	A	9	4	3	0	1	4.18
	B	8	0	0	0	0	5.00
	C	12	3	1	0	0	4.69
5. Group discussions.	A	5	8	2	1	0	3.59
	B	6	2	0	0	0	4.75
	C	3	9	4	1	0	4.06
	Mean of the means					A	3.88
						B	4.67
						C	4.20

A. Kirkwood Community College, Cedar Rapids, Iowa.

B. University of Georgia, Athens, Georgia.

C. Eastern Iowa Community College, Scott Campus, Davenport, and Clinton Campus, Clinton, Iowa.

formats or indicated they liked the variety of using different instructional strategies.

Comparisons Between Pilots

Although there were a number of differences between the pilot groups' responses to the evaluation instrument, contributing causal factors is risky. Ideally, this could be done on the basis of the different administrative formats; nine or fourteen weeks during the school, and the concentrated two week course. However, there were numerous variables which may have affected the outcome. Group B, the Georgia participants, felt that they were expected to learn a great deal of material in a rather short period of time, Item 2 (Table 17). This certainly was a problem, but even though the participants in the other two pilots had nine weeks and fourteen weeks in which to cover the course, many were unable to find adequate time for this activity. Since the second pilot was a "Captive" group they were able to complete the course, even though they felt somewhat rushed. Because of the time requirements of the on-going educational programs for which they were responsible, approximately one-third of the participants in Group A, who completed the questionnaire, and whose data is analyzed, had not completed the course at the time they were surveyed. Due to scheduling problems a number of the Group A participants were unable to attend the "live" sessions regularly. In fact, attendance at these sessions for the first administration was sometimes rather poor. A tape recording of these sessions was made available to the participants, but there was certainly limitations in the overall effectiveness of the course because of this situation. It is felt that this does not completely discount the results of the data gathered, but it certainly affects it.

As can be seen in Table 17, the three groups responded similarly (less than .40 mean difference) on Items 4, 5, 8, 12, 14, 17, 18, 19, 21, 23 and 24. These items were described previously and since there was little difference between the groups they will not be discussed further.

The most substantial differences between the groups (more than 1.0 difference) were found on Items 1, 2, 6, 7, 15 and 25. On Item 1 all three groups disagreed with having all "live" sessions but Group B participants were much stronger in their disagreement. As described earlier, Item 2, which was concerned with the time duration for the course, showed variations between the three pilot administrations. There was not a high degree of disagreement by Groups A and C which had extended programs, but Group B did agree that the time was too short. More of the participants from Group A supported the possibility of having more general sessions (Item 6) than did the others, particularly the Group B participants. The Group B participants also disagreed more than the others that the staff was inaccessible, (Item 7) which could be expected because of the format used for that pilot administration. Group C had more participants who agreed that the course content pre-supposed far more training than they had (Item 15). Though the means for the three groups indicated that they were generally pleased with the teaching methods used for the course (Item 25) there was considerable variation. Group B showed the greatest degree of agreement, Group C was slightly less positive and the Group A mean of 2.66 was close to neutral.

For the remaining general items on which there was more than .40 difference Groups B and C tended to see the course in slightly more positive light than did Group A. This parallels the instructor's views and is attributed to the problems which occurred in the initial administration and the improvements which were made in the latter administrations.

In comparing the participants' responses to familiarity with the topics chosen (Table 18) the Group B mean of 4.13 is slightly higher than either Group A, 3.87, or Group B, 3.80. The individual means for the specific topics by each of the groups paralleled one another with the greatest amount of familiarity being with the first topic and the least familiarity with the later topics.

Opinions of the effectiveness of the various instructional strategies (Table 19) show some substantial differences. The overall mean of 4.67 for Group B is higher than the 3.88 mean for Group A. Comparing the overall mean for Group C with the other groups is not appropriate because of the availability of text-type tutorial packages for that administration.

The text-type tutorial packages were first made available for the third pilot administration. Subsequently, an additional single page evaluation form was added (Appendix J). Responses on the extent to which audio-tutorial packages were used as compared with text-type tutorial lessons are shown in Table 20. The increasing preference for text-type tutorial packages can be seen as one examines the participants' progression through the course. Initially about half of the participants used the text-type tutorial packages and half used both the text-type and the audio-tutorial packages. As the course progressed, participants ceased to use the audio-tutorial packages and relied only on the text-type tutorial packages. In response to the question asking why they had chosen the particular format, or combination of formats, 9 of the 16 participants indicated that the text-type tutorial packages were more convenient. One participant stated that the text-type tutorial packages were faster to use and three specified that they were better. The text-type tutorial packages allowed the participants to do the packages at any time and in any location, whereas with the audio-tutorial packages it was necessary for them to have an audio tape recorder available.

There were very few suggestions to specific ways by which the text-type tutorial packages might be improved. Five participants indicated that they enjoyed the text-type tutorial packages and that they were easier to use, one suggested less "skipping around," one requested more

TABLE 20

USE OF AUDIO-TUTORIAL VERSUS TEXT-TYPE TUTORIAL INSTRUCTIONAL PACKAGES FOR THE THIRD PILOT ADMINISTRATION

Lesson	Subject	Audio-Tutorial	Text-Type Tutorial	Both
2	Purposes	1	7	8
3	Preparatory Procedures		12	4
6	Writing Items		14	2
9	Assembling & Administration		15	1
13	Mathematical Statistics		15	1
15	Grading		16	

participant responses and another suggested additional open space for taking notes. The text-type tutorial packages were a definite improvement to this program and might well replace the audio-tutorial packages for future in-service teacher education courses. The audio-tutorial had been devised to parallel the use of audio-tutorial packages which the instructors might wish to develop for their students. The regular school setting usually provides a laboratory and in-school time for the participants to use audio-tutorial packages, a situation which does not necessarily exist for the in-service education of teachers.

General Comments

On the final open-ended question of the "In-Service Opinionnaire and Evaluation Instrument" (Appendix J) participants in the courses were asked for any additional feedback which they felt was appropriate. Most of the comments were very general and many repeated information from the previous portions of the questionnaire. Responses were mostly positive regarding the overall course, as well as specific points. There were two comments which indicated the course was not conducted during the most desirable time of year. One participant stated his reactions to all parts of the opinionnaire would have been much more positive if there had been sufficient time to complete the course. One very valid reaction made by several Group A participants was the need for each participant to have a personal copy of the textbook. Because large portions of the text were not used as reading assignments the instructor was somewhat reluctant to require each individual to purchase a copy of the text. Eight copies were made available for use by the participants. Near the end of the first administration most participants indicated a desire to have their own copy of the text so they were ordered, though they were not available until the course was completed. For the second and third pilot offerings each participant was expected to purchase a textbook.

VII. CONCLUSIONS AND RECOMMENDATIONS

This chapter consists of a descriptive assessment of the overall project and conclusions made regarding the three major activities of which the project was composed. Specific recommendations for future activities are also included. The three major activities were (1) the institute, (2) the "Guidelines" publication, and (3) the in-service teacher education course.

CONCLUSIONS

The overall objective of this project was to improve the teaching-learning process in educational programs preparing health workers. It was not feasible to do an assessment of the actual change in classroom behavior of teachers and students as a means to evaluate this overall objective. However, it has been concluded from an analysis of the feedback received that this project has had a substantial affect upon teacher education activities throughout the Nation. It is assumed that this has affected classroom activities and subsequently, achievement of the overall objective. Although the three aspects of the project were highly interrelated it seems appropriate to discuss the conclusions separately for each of them. For details on the evaluations which led to these conclusions the reader is referred to "The Institute Evaluation," Chapter IV; the "Guidelines" publication, Chapter V; and the "In-Service Education Course," Chapter VI.

THE INSTITUTE

The institute evaluation was composed of the on-going assessment and the follow-up assessment. The on-going assessment was designed to measure the immediate value of the institute; whereas, the follow-up assessment attempted to measure whether the participants did, in fact, return to their places of employment and conduct, or stimulate others to conduct,short-term teacher education activities.

The On-Going Assessment

The results of a role perception inventory, administered in a pre-post format, indicated that the participants' responses changed significantly on eight of twenty-five bipolar scales. It is therefore concluded that it is possible to change one's role perception, even in the short time of two weeks. The changes were viewed as generally positive by the institute staff. It is felt that use of the semantic differential was successful for this purpose and that it would be useful for evaluating other short-term teacher education activities. The findings of the role perception inventory were substantiated by the subjective evaluations of the staff members and by the data gathered on the follow-up assessment.

On a pre- and post-assessment self-rating scale, the participants were asked to rate themselves regarding their familiarity with the topics which were included in the institute. Although this was a subjective opinionnaire and there was no control group with which to compare the participants, the participants showed significant change on ten of the sixteen topics. It is concluded that the participants did gain substantial knowledge from the institute.

An evaluation committee,composed of participants, evaluated each of the modular units. They identified weaknesses within individual modules and noted that some modules were better received than others. However, the overall assessment of the modular units was quite conclusively positive.

The participants were also asked to evaluate administrataive factors such as scheduling and organization, content and presentations, environment facilities, and satisfactions. The results of the wide variety of assessments under this section showed that the participants had a very positive attitude toward these aspects of the institute. Participants identified all of the topics as relevant and useful with "Analyzing the Role of the Health Specialist as Teachers," "Planning Curricula," and "Selecting Instructional Strategies" being the three highest rated. The three topics rated as most difficult were "Developing Conceptual Models to Analyze Occupations," "Describing the Educational Product in Behavior Terms," and "Measuring and Evaluating Learning Achievement."

The staff was also asked to complete a short evaluation, which to some extent, paralleled the participant evaluation. The staff was quite positive in their response to the administration, content and process aspects of the institute. Several of the staff members, who had been extensively involved as participants and staff members in previous teacher education activities, indicated that this was the most outstanding activity of this nature of which they had been a part.

The Follow-Up Assessment

The follow-up assessment completed one year following the institute was designed to gather information on changes which had occurred as a result of participation in the institute. Primary emphasis was placed on the extent to which the individuals had conducted, or stimulated others to conduct, short-term teacher education activities. However, a wide variety of other data was gathered as such an activity was felt to have many "side-effects."

Many formal workshops and conferences were reported by participants and staff members. These ranged from one day to two-week activities for personnel in programs preparing health workers and in some cases for individuals outside the health field. In addition, there was a wide range of informal activities by which participants reported having had substantial influence on teachers. The reader is encouraged to examine both the section in Chapter IV entitled "The Follow-Up Assessment," and the statements shown in the appendix which have caused the authors to conclude that the institute was highly successful in achieving its major objective. A wide range of other activities including: role change, attendance at workshops, contact with other participants and staff, and pronounced changes in philosophy of education, were also examined and many positive responses were received.

From all indications, the institute had a substantial influence on a large number of individuals who, in turn, had a great affect upon teacher education activities and subsequently on the teaching-learning process in health occupations programs throughout the nation.

THE "GUIDELINES" PUBLICATION

There was a limit to the number of individuals who could participate in the institute both because of the financial limitations and because of many interested individuals who could not come to Iowa during the time the activity was held. To provide the participants and others who were interested with assistance in planning and conducting short-term teacher education activities the "Guidelines" publication was developed. As is reported in the evaluation portion of Chapter V, the document appears to have been quite successful in assisting individuals in a wide variety of teacher education activities. Responses to the questionnaire showed that many individuals used the document in influencing a large number of teachers within, and outside of, the health field. Many of those who responded indicated that the document will be used for future activities. Feedback on the usability of the document was quite positive. Responses to questions on each of the six modular units and to the specific aspects within the modular units were very complimentary.

The demand for copies of the "Guidelines" publication has continued as users have referred it to others. Although there are certainly faults and limitations to the document, some have referred to it as "one of a kind" in this field.

THE IN-SERVICE EDUCATION COURSE

The model in-service teacher education course was piloted at three different institutions and the results were generally quite favorable for each administration. It was found that a great deal of planning is necessary when scheduling such an in-service teacher education activity to be conducted during the school year. This is necessary so that all individuals participating may have adequate opportunity to be involved in the sessions. It was also found that several different administrataive formats can be used for such activity. The use of "packaged" lessons proved quite acceptable for achieving some of the educational objectives of this particular course. Of particular note was the positive reaction received to the use of text-type tutorial packages as compared with audio-tutorial packages. This allowed the participants to do packaged lessons at a time convenient to them, without having to bother with the availability and use of a tape recorder.

The evaluation of participants' achievement and measures of their attitude toward the activity were highly positive. The materials which were developed could well be utilized by others in conducting in-service teacher education courses. There were some differences in reaction to the three different pilot groups on specific items of the post-assessment, but generally these differences were not too great, or were readily understood based on the different types of administrative formats.

RECOMMENDATIONS

In developing the recommendations to follow, three basic interrelated assumptions have been made. First, it is assumed that the quantity and quality of health care delivery will be improved by producing an increased number of competent health care workers. Second, it is further assumed that improving the teaching-learning process in educational programs preparing health care personnel will increase the number and competency of those providing health care services. And, finally, it is assumed that the teaching-learning process in educational programs for health workers will be improved if the teachers participate in quality teacher education activities.

In addition to the recommendations presented in this chapter the reader is referred to the recommendations which the institute staff made immediately following the institute ("On-Going Assessment," Chapter IV).

Throughout their experiences with each of the three major activities of this project the authors had an opportunity to assess the teacher education needs in health occupations education, to learn what types of activities are being conducted, and to consider what further action or changes might be appropriate in this area.

To assist in meeting the present and future needs in teacher education for health occupations education, the authors make the following recommendations:

(1) that those in leadership positions make every effort to increase the availability of quality short-term teacher education activities;

(2) that a significant increase in professional development funds be made available, primarily at the federal and state level, for operating teacher education activities;

(3) that research studies be conducted to analyze the role of the health specialty teacher and to develop improved approaches to the teaching-learning process in this field;

(4) that the subject matter of teacher education activities be based upon identified needs of those to be served;

(5) that a wide variety of administrative formats and types of short-term teacher education activities be available, so as to best meet the needs of all teachers;

(6) that whenever possible teacher education programs be designed to serve a variety of health specialties and levels in order to improve communication and to facilitate articulation efforts;

(7) that teacher education activities be conducted in a manner which models the best techniques for facilitating learning;

(8) that every effort be made to prepare teachers who are capable of implementing the newer concepts and strategies of educational technology, and who are sufficiently concerned with the desirability of humanizing education through applying learner-centeredness to the educational process;

(9) that efforts be made to change teacher certification requirements so that those with demonstrated competency may teach, rather than restricting certification to those who have obtained certain academic credentials;

(10) that universities and colleges be encouraged to develop preparatory programs specifically designed for preparing teachers for this field;

(11) that individuals conducting teacher education activities be encouraged to share their experiences and materials with other teacher educators;

(12) that programs be developed to prepare and update teacher educators so that they can conduct quality teacher education activities; and

(13) that institutes such as the one reported herein be repeated periodically as a means for continuously stimulating individuals and institutions to conduct short-term teacher education activities for the health occupations education field.

APPENDIX A

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AND
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APPENDIX B

INSTITUTE BROCHURE
AND
APPLICATION

100

THE UNIVERSITY OF IOWA

DEVELOPING TEACHING COMPETENCIES NEEDED BY EDUCATIONAL PERSONNEL IN POST-SECONDARY HEALTH OCCUPATIONS PROGRAMS

PURPOSE OF THE INSTITUTE

This institute is designed to contribute to the quantity and quality of health care services by improving the teaching-learning process in post-secondary vocational and technical programs which prepare health care workers. This will be accomplished by extending and improving the teacher education competencies of 100 participants from across the nation who each, in turn, will implement or stimulate and promote teacher education activities in his state, region or field. In addition, this group will serve to evaluate guidelines and supportive materials for a model short-term teacher education program.

THE PROGRAM

The institute program will consist primarily of activities following the model short-term teacher education guidelines. This will allow for an assessment of the suggested topics and an evaluation of the content while preparing the participants for their role in the teacher education process.

The guidelines, in modular units, cover areas such as: the changing health industry, the role of the health specialist as a teacher, structuring occupational roles, curriculum planning, behavioral objectives, the learner and learning, student selection, instructional strategies, instructional media, and evaluation.

Believing that the methodological and attitudinal approach to educational activities is as important as the content, the institute staff will utilize instructional strategies which actively involve the participants. Through small groups, task groups, and individual activities, the participants will gain knowledge and skills in teacher education activities, explore relevant problems, be exposed to the ideas of others, and develop materials for use in their teacher education activities. Micro-teaching presentations will be made and participants will have an opportunity to become familiar with video tape recording and to critique these presentations.

PARTICIPANT SELECTION

A committee will select 100 participants from the applications received. While the number of individuals who spend a major portion of their time in teacher education activities for post-secondary health occupations education personnel is limited, there is a pool of individuals who perform leadership, consultive and advisory or coordinating services for this area of vocational and technical education. Applications are particularly encouraged from this group which includes: state and regional supervisors or consultants of health occupations education and their assistants; teacher educators, primarily in fields other than health, who are providing some services to the health occupations education area; personnel from the Regional Medical Programs; representatives of professional associations who have sponsored or are engaged in teacher education or improvement activities; coordinators or directors of health occupations programs in local junior-community colleges; coordinators or directors in schools of allied health; and, lead instructors in both professional and allied health programs.

Individuals who are both experienced and inexperienced in teacher education activities will be included as participants.

The following will serve as guides in the selection process:

1. Top priority will be given to those applicants who can substantiate; by position, experience, preparation, interest, or otherwise; that following their participation in the institute they will be able to have a significant effect upon teacher education activities for health occupation education instructional personnel.

2. Priority will be given to those applicants who can identify that they are or may work as one of a team of two to four individuals from a given state, region or field who will work together to implement short-term teacher education activities.

3. Consideration in the selection process will be given to choosing participants who represent the health occupations education personnel to be served in terms of geographic location, population concentration and type of health specialty.

STIPENDS AND TRANSPORTATION

Participants will be eligible to receive, upon application, stipends of $75 per week to help defray the costs of housing and meals.

It is anticipated that sufficient monies will be available to pay transportation costs. Once the actual cost, not to exceed that of a single round trip air-coach flight to Iowa City, has been determined, the amount of reimbursement will be established.

CERTIFICATE AND UNIVERSITY CREDIT

All participants will receive a certificate of participation.

For those wishing to receive 2 semester hours of graduate or undergraduate credit, a $40.00 registration fee will be required. No pre-admission requirements are necessary

TWO-WEEK SUMMER INSTITUTE

August 18-29, 1969

INSTITUTE STAFF

Director - Dr. Lewis D. Holloway
Assistant Professor
College of Medicine
Program in Health Occupations Education
The University of Iowa

Asst. Director - Dr. Larry J. Bailey
Research Assistant Professor
Department of Vocational and Technical Education
College of Education
The University of Illinois

Instructor - Dr. Lawrence Borosage
Professor
Secondary Education and Curriculum
College of Education
Michigan State University

Co-Director - Dr. Robert M. Tomlinson
Associate Professor
Department of Vocational and Technical Education
College of Education
The University of Illinois

Instructor - Dr. Jacob Stern
Associate Professor
Department of Vocational and Technical Education
College of Education
The University of Illinois

Instructor - Dr. Duane Anderson
Assistant Professor, Higher Education
College of Education
The University of Iowa

In addition, several consultants will make presentations in specialized areas.

ACCOMMODATIONS

The Iowa Memorial Union was conceived and built as a place where conference or institute participants can live, work and relax in a most comfortable setting. The Union, air conditioned throughout, provides a wide range of facilities and services.

Room rates at the Iowa House, a part of the Iowa Memorial Union, will be $10.50 per day for singles and $6.75 per day for shared twins plus tax. Free parking for Iowa House guests is provided in the ramp across the street.

NON-DISCRIMINATION PROVISION

Discrimination prohibited-Title VI of the Civil Rights Act of 1964 states: "No person in the United States shall, on the ground of race, color, creed, sex, or national origin, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving Federal financial assistance."

The University of Iowa operates in compliance with this law.

DEADLINES

Completed applications must be postmarked no later than June 13, 1969.

Applicants will be notified of the selection committee action by June 27, 1969.

Participants will be expected to return completed acceptance forms and preliminary registration materials by July 11, 1969.

REQUESTS FOR APPLICATIONS OR INFORMATION

For applications and/or information, contact:

Dr. Lewis D. Holloway, Director
H.O.E. Teacher Education Institute
The University of Iowa
135 Melrose Avenue
Iowa City, Iowa 52240

INSTITUTE APPLICATION

Developing Teaching Competencies Needed
By Educational Personnel in Post-Secondary
Health Occupations Programs

1. Name of Applicant: Dr.
   Mr.
   Mrs.
   Miss____
   (Last) (First) (Middle)

2. Age______

3. Home Address:

   Street_____________________________, City___________________

   State_______________ Zip Code_________ Telephone____________

4. Employment - Present

   Name of Institution or agency_______________________________

   Street Address____________________ City____________________

   State_______________ Zip Code_________ Telephone____________

   Position Title____

   Number of years in present position_____ (Briefly describe your activities, especially those related to teaching or teacher education.)

   ____

   ____

   ____

   ____

   ____

5. Employment - Next Year

   Will you be employed next year in the same position described above? Yes___ No ___ If "no," indicate your new position

   ____

   What percent of your time next year will be spent:

   Providing formal or informal teacher education activities for H.O.E. personnel ___%

   Providing advisory services to teachers and H.O.E. educational programs ___%

Administering or directing H.O.E. programs ___%
Teaching classes ___%
Other (specify) ___%
100%

6. Employment - Prior (Three positions, most recent listed first)

Position	Institution or Employer	City	State	Years

7. Educational Background

	Institution	Major Field	Year Completed	Degree
Post H.S. (non degree)				
College				
Military				
Other				

8. Licensure or Certification

Health Specialty____

Teaching____

9. Who are other persons from your state, region, or field with whom you could work as a team or core group to further teacher education activities in H.O.E.? Please indicate if, to your knowledge, these individuals are also applying to this institute.

Name	Position	Address	Applicant
			Yes__ No __
			Yes__ No __
			Yes__ No __

10. How do you propose to use what you might learn by attending the institute to implement or improve teacher education activities for health occupations education personnel?

11. Will you want to enroll for college credit? Yes ___ No ___;
Grad ___ Undergrad ___

12. Applicant's Signature__________________________ Date____________

Application deadline is June 13, 1969.

Send application to:

Dr. Lewis D. Holloway, Director
H.O.E. Teacher Education Institute
The University of Iowa
135 Melrose Avenue
Iowa City, Iowa 52240

APPENDIX C

INSTITUTE PARTICIPANTS

INSTITUTE PARTICIPANTS*

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*This listing includes only those individuals who attended as regular participants through at least one full week of the institute. Addresses are the most recent available and in some cases reflect a change in position since the institute.

The letter-number by each name designates discussion group assignments.

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APPENDIX D

INSTITUTE PROGRAM

DEVELOPING TEACHING COMPETENCIES NEEDED BY EDUCATIONAL PERSONNEL IN POST-SECONDARY HEALTH OCCUPATIONS PROGRAMS

H.O.E. TEACHER EDUCATION INSTITUTE

August 18-29, 1969

Program

MONDAY August 18

8:15			Registration - Coffee and donuts
9:00	G*	Holloway	Welcome by Institute Director and special guests Miss Elizabeth E. Kerr Dr. Howard R. Jones Mr. O. A. Brunsvold Miss Helen K. Powers
		Holloway	Overview of The Institute Staff Introductions
		Stern	Objectives of The Institute

Unit 1

SUPPORTIVE PERSONNEL IN THE CHANGING HEALTH INDUSTRY

10:10	G	Stern	Introduction
10:15			"Utilization and Preparation of Personnel for the Health Care Industry" Miss Elizabeth E. Kerr
11:15			Break
11:30			"The State of Affairs in Health Occupations Education at the Vocational and Technical Levels" Miss Helen K. Powers
12:15			Lunch

*G General Sessions

1:30	G		"The Role of the Health Specialist as a Teacher" Dr. Robert M. Tomlinson
2:15	G	Anderson	Designate and Orient General Interest Groups (GIG) and Specialty Interest Groups (SIG)
		Bailey	Discuss Role and Appointment of Advisory Committee Discuss Evaluation Committee
		Holloway	Charge to General Interest Groups (GIG) for first session
2:30			Break
2:45	GIG	ALL	Common and Unique Problems Across the Health Specialty Fields Select Recorder Discussion
4:10	G	Holloway	Assemble to pull together loose ends
5:30	(Buses Leave)		Dinner - Ox Yoke Inn - Amana, Iowa

TUESDAY August 19

8:30		Anderson	GIG Recorders Meeting
8:30		Bailey	Evaluation Committee Meeting
9:00	GIG	ALL	Further discussion on Unit 1 topics Review Recorders' report Select Advisory Committee members
9:20	G	Anderson	Reports by GIG Recorders
10:15			Break

Unit 2

DEFINING AND DESCRIBING THE EDUCATIONAL PRODUCT

10:30	G	Borosage	Introduction

			"Conceptual Models to Analyze Occupations for Educational Purposes" Dr. Jacob Stern
11:45			Lunch
1:15	G		"A Conceptual Model for a Specific Health Field" Dr. Robert M. Tomlinson
			Designate Specialty Interest Groups (SIG)
1:45	SIG	ALL	Discussion on Conceptual Models
3:30			Break
3:45	G	ALL	Conceptual Model Summary
4:30			Advisory Committee-Staff Meeting
			Dinner
7:30	G	Borosage	Orientation to Implementation Groups (IG)
	IG		Discussion sessions on implementation of teacher education activities

WEDNESDAY August 20

8:30			Staff Meeting
9:00	G		"Writing Educational Objectives At Various Levels of Specificity" Dr. Jacob Stern
10:15			Break
10:30	SIG	ALL	Work session on writing objectives Designate Task Groups (TG)
11:45			Lunch
1:15	G		"Objectives for Medical Education (Ophthalmology)" Dr. Bruce Spivey
1:45	SIG	ALL	Work session on writing objectives
	TG		Group and individual work in writing objectives

3:00			Break

Unit 3

THE LEARNER AND LEARNING

3:15	G		"Social Forces and their Impact on the Educational Process" Dr. Jacob Stern
			Reaction to previous presentation Dr. Michael Masucci
4:45			Advisory Committee-Staff Meeting

THURSDAY August 21

8:30			Staff Meeting
9:00	G		"The Process of Learning" Dr. Duane Anderson
9:45			"Reactions to Concerns Expressed by Participants" Dr. Michael Masucci
10:15			Break
10:30	G		(Continue Above)
11:45			Lunch
1:15	G		"An Approach to Student Selection" Dr. Michael Masucci
1:45	GIG	ALL	Student Selection Discussion
2:45			Break
3:00	G	ALL	Summary Discussion: The Learner and Learning
4:00		ALL	Advisory Committee-Staff Meeting

FRIDAY August 22

8:30			Staff Meeting
9:00	G	Borosage	Symposium on Vocational Education Virginia Barham Clara Brentlinger Julian Castillo Opal Thompson Robert Tomlinson
10:15			Break

Unit 4

DESIGNING LEARNING PROGRAMS

10:30	G	ALL	Instructional Strategies General Presentations Staff Film - "New Paths to Learning"
11:45			Lunch
1:15			Instructional Strategies (continued)

Unit 4 to be continued

Unit 6

THE EDUCATIONAL PROCESS

1:45	G		"Orientation to Micro-teaching" Dr. Lewis D. Holloway
2:45			Break
3:00	SIG	ALL	Discussions on micro-teaching
Arr.	TG	ALL	Work on micro-teaching presentations

SATURDAY August 23

9:00		Staff available for assistance Video-tape equipment available
11:00		Staff Meeting
1:15		Informal Recreational Activities

SUNDAY August 24	Informal Recreational Activities

MONDAY August 25

8:30		Staff Meeting
9:00		Review and redirect
	Tomlinson	Institute state-of-affairs
	Holloway	Institute business Status of preparation for micro-presentation

---

Unit 4

DESIGNING LEARNING PROGRAMS (Continued)

9:30 G	"Curriculum Planning" Dr. Lawrence Borosage
10:15 SIG	Up-date activities
10:30	Break
10:45 G	Instructional Media General Introduction Mr. Cal Mether
11:45	Lunch
1:15 G	Presentations and Demonstrations on Specific Techniques and Equipment

			Single concept films 2 X 2 slides Mr. Keith Doellinger
2:00	G		Audio-Tutorial systems Mr. James Orth
2:45			Break
3:10			Overhead Transparencies Mr. Robert Long
4:00	G	Tomlinson	Ad Hoc meeting - National Conference on Health Occupations Education to be held in New Orleans, February, 1970
			Dinner
6:30			Media equipment available for "hands-on" activities Production and use of overhead transparencies Trainex filmstrips and records Audio-tutorial materials as used in the Associate Degree Nursing Program at Delta College, Michigan Video-tape recording

TUESDAY August 26

Administration and Coordination

8:30	G	Tomlinson	Panel Discussion Dr. Lawrence Borosage Mr. Easton Smith Mr. Dwight Marshall Mr. Don Cordes Miss Elizabeth Kerr
10:00			Break
10:15	GIG	ALL	Discuss Administration and Coordination
11:45			Lunch

Unit 5

EVALUATION IN THE EDUCATIONAL PROCESS

1:15	G	Borosage	An Overview
1:45	G		"Faculty Evaluation" Dr. Duane Anderson
3:00			Break
3:10		ALL	Advisory Committee-Staff Meeting
3:15	G		"Writing Classroom Tests" Dr. Charles Porter
4:15	G		Ad Hoc Meeting - Writing objectives
			Dinner
6:30			Video taping sessions

WEDNESDAY August 27

8:30	G		"Scoring, Compiling Scores and Grading" Dr. Charles Porter
11:45			Lunch

Unit 6

THE EDUCATIONAL PROCESS (Continued)

1:15	G		"Micro-teaching" Mr. Richard Nelson
1:45	SIG TG	ALL	Micro-experience Planning
3:00			Break

3:15	Borosage	Conducting Short-Term Teacher Education Activities
		Reports of the Implementation Groups (IG)
4:05	ALL	Advisory Committee-Staff Meeting
4:15	Holloway	Ad Hoc Meeting - Degree programs to prepare teachers and administrators for health occupations education programs.
		Dinner
6:00		Video-taping sessions

THURSDAY August 28

8:00		Staff Meeting
8:30 TG		Micro-experiences
12:00		Lunch
1:00		Micro-experiences
2:00 G		General viewing of selected micro-experiences
2:45		Break
3:00	Bailey	Institute Evaluation
4:00	Holloway	Research Dissemination Systems
4:20		Special Awards Session
4:30		Ad Hoc Meeting - Student Selection

FRIDAY August 29

9:00 G	ALL	Research in Health Occupations Education Needs and Implementation
9:45	ALL	Discussion of major concerns and needs in health occupations education field
10:15	Holloway	Presentation of certificates

10:30	Break
11:00 G	Ad Hoc Meeting - Continued discussion of problems in health occupations education field
11:45	Lunch
1:15	Staff meeting

APPENDIX E

INSTITUTE ON-GOING ASSESSMENT INSTRUMENTS

____
Name

ROLE PERCEPTION INVENTORY

Instructions

The purpose of this instrument is to measure how you perceive your present role in health occupations education. This is done by having you judge your present role against a series of descriptive scales. In completing the inventory, please make your judgments on the basis of how you perceive your role in relation to each pair of descriptors. Make your judgements on the basis of what they actually mean to you.

Here is how you are to mark the scales:
If you feel that the concept at the top of the page (Present Role in Health Occupations Education) is VERY CLOSELY RELATED to one end of the scale, you should place your check-mark as follows:

fair _X_:___:___:___:___:___:___ unfair

or

fair ___:___:___:___:___:___:_X_ unfair

If you feel that the concept is QUITE CLOSELY RELATED to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong ___:_X_:___:___:___:___:___ weak

or

strong ___:___:___:___:___:_X_:___ weak

If the concept seems only SLIGHTLY RELATED to one side as opposed to the other side (but not really neutral), then you should check as follows:

good ___:___:_X_:___:___:___:___ bad

or

good ___:___:___:___:_X_:___:___ bad

The direction toward which you check, of course, depends upon which of the two ends of the scale seems most characteristic of the thing you are judging.

If you consider the concept to be NEUTRAL on the scale, both sides of the scale EQUALLY ASSOCIATED with the concept, or if the scale is COMPLETELY IRRELEVANT, unrelated to the concept, then you should place your checkmark in the middle space:

safe ____:____:____:_X_:____:____:____ dangerous

IMPORTANT: (1) Place your check-mark in the MIDDLE OF SPACES, not on the boundaries:

This Not$_X$This
____:____:_X_:____:____:____:____

(2) Be sure you check every scale -- do not omit any.

(3) Never put more than one check-mark on a single space.

Sometimes you may feel as though you have had the same item before. This will not be the case, so DO NOT LOOK BACK AND FORTH through the items. Do not try to remember how you checked similiar items earlier. MAKE EACH ITEM A SEPARATE AND INDEPENDENT JUDGMENT. Work at a fairly high speed through the inventory. Do not worry or puzzle about individual items. It is your first impression, the immediate "feeling" about the item, that is important. On the other hand, please do not be careless, because we want your true impression. When you are certain that you correctly understand the test instructions, turn to the next page and begin work.

REMEMBER TO MAKE YOUR JUDGMENTS ON THE BASIS OF HOW YOU PERCEIVE YOUR PRESENT ROLE IN HEALTH OCCUPATIONS EDUCATION IN RELATION TO EACH PAIR OF DESCRIPTORS.

H.O.E. Institute, 1969

PRESENT ROLE IN
HEALTH OCCUPATIONS EDUCATION

autocratic ___:___:___:___:___:___:___ democratic

professional ___:___:___:___:___:___:___ technical

inflexible ___:___:___:___:___:___:___ adaptable

generalist ___:___:___:___:___:___:___ specialist

manual ___:___:___:___:___:___:___ intellectual

health specialist ___:___:___:___:___:___:___ teaching specialist

low esteem ___:___:___:___:___:___:___ high esteem

optimistic ___:___:___:___:___:___:___ pessimistic

didactic ___:___:___:___:___:___:___ clinical

active ___:___:___:___:___:___:___ passive

service ___:___:___:___:___:___:___ education

supervised ___:___:___:___:___:___:___ supervises

licensure ___:___:___:___:___:___:___ certification

inefficient ___:___:___:___:___:___:___ efficient

vocational ___:___:___:___:___:___:___ technical

dull ___:___:___:___:___:___:___ stimulating

organized ___:___:___:___:___:___:___ disorganized

technical competence ___:___:___:___:___:___:___ teaching competence

unpredictable ___:___:___:___:___:___:___ predictable

teaching objectives ___:___:___:___:___:___:___ learning objectives

innovative ___:___:___:___:___:___:___ traditional

content oriented ___:___:___:___:___:___:___ person oriented

dependent ___:___:___:___:___:___:___ independent

dominant ___:___:___:___:___:___:___ submissive

evaluate objectives ___:___:___:___:___:___:___ evaluate content

Name

SELF - RATING SCALE

1. For each of the following topic areas, circle the number that best indicates the extent to which you are familiar with the topics to be covered, as follows:

5 Very familiar
4 Rather familiar
3 Somewhat familiar
2 Hardly familiar
1 Not at all familiar

Identifying factors affecting change in the health industry.. 5 4 3 2 1
Examining voc.-tech. programs for auxiliary personnel....... 5 4 3 2 1
Analyzing the role of the health specialist as teacher....... 5 4 3 2 1
Analyzing the role of the teacher of teachers................ 5 4 3 2 1
Developing conceptual models to analyze occupations.......... 5 4 3 2 1
Describing the educational product in behavioral terms....... 5 4 3 2 1
Considering factors which affect learning.................... 5 4 3 2 1
Examining the student selection process...................... 5 4 3 2 1
Planning curricula... 5 4 3 2 1
Selecting instructional strategies........................... 5 4 3 2 1
Selecting and producing instructional media.................. 5 4 3 2 1
Conducting administrative and coordination activities........ 5 4 3 2 1
Evaluating instructional personnel........................... 5 4 3 2 1
Measuring and evaluating learning achievement................ 5 4 3 2 1
Using micro-teaching as a tool for improving instruction..... 5 4 3 2 1
Conducting short-term teacher education activities........... 5 4 3 2 1

2. Please describe in your own words the one or two things that you want most to obtain from this institute.

H.O.E. Institute, 1969

____
Name

PARTICIPANT OPINIONNAIRE AND EVALUATION INSTRUMENT

This instrument has been prepared so that you can indicate how you feel about selected aspects of the institute. You will agree with some statements and disagree with others. You are offered five possible answers to each statement. In each case, draw a circle around the letter which represents your own reaction as follows:

SA if you strongly agree with the statement
A if you agree but not strongly so
N if you are neutral or undecided
D if you disagree but not strongly so
SD if you strongly disagree with the statement

Remember, the only correct answer is the one which actually represents how you feel about each statement. The "neutral or undecided" answer should be circled only when you have no opinion.

Scheduling and Organization

1. Two weeks was too long a period to leave work and home for the purpose of attending this institute......... SA A N D SD
2. Two weeks was too short a period in which to learn the content of this institute............................ SA A N D SD
3. I was allowed enough time in which to pursue activities of my own choosing................................... SA A N D SD
4. I would have preferred not to have evening meetings.... SA A N D SD
5. Topics were scheduled in an appropriate sequence....... SA A N D SD
6. Sufficient opportunities were provided to interact with other participants................................... SA A N D SD
7. The institute staff was inaccessible or unapproachable to get individual attention......................... SA A N D SD
8. In general, the institute was well organized... .... SA A N D SD
9. A greater proportion of time should have been spent in individual presentations than actually occurred...... SA A N D SD
10. A greater proportion of time should have been spent in work groups.. SA A N D SD
11. The schedule was too fixed............................ SA A N D SD

Content and Presentation

12. Individual presentations were too long to sit and listen or to take notes........................... SA A N D SD

13. The course content presupposed far more training than I had.. SA A N D SD

14. The presentations were stimulating and interesting..... SA A N D SD

15. The discussion leaders were effective in their role.... SA A N D SD

16. The presenters were well prepared...................... SA A N D SD

17. I expect to be able to apply the content which was presented in the institute.......................... SA A N D SD

18. The information presented was too elementary........... SA A N D SD

19. I was stimulated to think objectively about the topics presented.. SA A N D SD

20. Too much jargon was used by the presenters............. SA A N D SD

21. Too much emphasis was placed on topics that are unimportant.. SA A N D SD

22. The presentation of the content material was paced too fast.. SA A N D SD

23. I am pleased with the teaching methods used for the institute.. SA A N D SD

Environment and Facilities

24. The "Learning Resource Center" was a valuable adjunct to the institute................................. SA A N D SD

25. The unavailability of books and journals interfered with attempts to master the content of each modular unit.. SA A N D SD

26. My housing accommodation was satisfactory............. SA A N D SD

27. The meeting rooms were adequate and conducive to learning.. SA A N D SD

28. Recreational facilities were inadequate............... SA A N D SD

29. The food services were poor........................... SA A N D SD

Satisfactions

30. If I had to do it over again I would apply for the institute which I am just completing................. SA A N D SD

31. I would recommend to others that they participate in an institute of this type............................ SA A N D SD

32. I anticipate maintaining some type of contact with at least one member of the institute staff.............. SA A N D SD

33. It is likely that I will collaborate with someone else attending this institute on a future educational activity (other than those I already would be likely to work with).. SA A N D SD

34. The staff should feel that it has accomplished its objectives during this institute..................... SA A N D SD

35. The participants accepted the objectives of this institute.. SA A N D SD

36. The objectives of this institute were not the same as my objectives...................................... SA A N D SD

37. We did not relate theory to practice.................. SA A N D SD

38. I did not think I would learn as much in this institute as I have.. SA A N D SD

39. I was impressed with the qualifications and abilities of my fellow participants............................ SA A N D SD

40. Possible solutions to my problems were considered...... SA A N D SD

41. I can see no advantage of this type of short term institute compared to other types of teacher education programs.................................. SA A N D SD

42. Attempts to evaluate the institute (including the present form) interfered with more important activities.. SA A N D SD

Course Topics

1. The following topics were presented in the institute. Please rank the topics according to their relevance and usefulness for you. A ranking of "1" placed in the bracket indicates the most relevant and useful topic, a "2" the second most relevant and useful, etc. Continue consecutively until each topic has been assigned a value, from 1 to 16.

Identifying factors affecting change in the health industry........( )
Examining voc.-tech. programs for auxiliary personnel.............( )
Analyzing the role of the health specialist as teacher.............( )
Analyzing the role of the teacher of teachers.......................( )
Developing conceptual models to analyze occupations...............( )
Describing the educational product in behavioral terms............( )
Considering factors which affect learning...........................( )
Examining the student selection process.............................( )
Planning curricula..( )
Selecting instructional strategies......................................( )
Selecting and producing instructional media.........................( )
Conducting administrative and coordination activities.............( )
Evaluating instructional personnel.....................................( )
Measuring and evaluating learning achievement......................( )
Using micro-teaching as a tool for improving instruction...........( )
Conducting short-term teacher education activities.................( )

2. Now that you have completed the institute, is there anything related to the above topics that you would like to study further?

Yes............( )
No.............( )

3. (If yes) What specifically would you like to study?

____

____

4. How would you like to do so? (Check all that apply.)

Study on my own..( )
Attend another institute full-time for 2 weeks.............( )
Attend a full semester course (once a week for 18 weeks)....( )
Attend a conference or workshop (2 - 3 days, full-time).....( )
Other ______________________________...............( )
(specify)

5. For the topic you ranked as being most relevant, please explain in detail those aspects of the subject or discussion topic that contributed toward it being valuable to you.

6. For the topic you ranked as being least relevant, please explain in detail those aspects of the subject or discussion topic that contributed toward it being least valuable for you.

____

____

____

7. The following topics were presented in the course. Please rank the topics according to their difficulty for you. A ranking of "1" placed in the bracket indicates the most difficult topic, a "2" the second most difficult, etc. Continue consecutively until each topic has been assigned a value,from 1 to 16.

Identifying factors affecting change in the health industry.........( )
Examining voc.-tech. programs for auxiliary personnel..............( )
Analyzing the role of the health specialist as teacher.............( )
Analyzing the role of the teacher of teachers......................( )
Developing conceptual models to analyze occupations................( )
Describing the educational product in behavioral terms.............( )
Considering factors which affect learning..........................( )
Examining the student selection process............................( )
Planning curricula...( )
Selecting instructional strategies.................................( )
Selecting and producing instructional media........................( )
Conducting administrative and coordination activities..............( )
Evaluating instructional personnel.................................( )
Measuring and evaluating learning achievement......................( )
Using micro-teaching as a tool for improving instruction...........( )
Conducting short-term teacher education activities.................( )

8. For the topic that you ranked most difficult, please explain why you had difficulty understanding it.

____

____

____

9. To what extent is this topic clear to you now?

Extremely clear.......( )
Rather clear..........( )
Somewhat clear........( )
Hardly clear..........( )
Not at all clear......( )

Final Self-Rating

10. For each of the following topic areas, circle the number that best indicates the extent to which you are now familiar with the topics which were presented, as follows:

5 Very familiar
4 Rather familiar
3 Somewhat familiar
2 Hardly familiar
1 Not at all familiar

Identifying factors affecting change in the health industry..	5 4 3 2 1
Examining voc.-tech. programs for auxiliary personnel.......	5 4 3 2 1
Analyzing the role of the health specialist as teacher.......	5 4 3 2 1
Analyzing the role of the teacher of teachers...............	5 4 3 2 1
Developing conceptual models to analyze occupations..........	5 4 3 2 1
Describing the educational product in behavioral terms.......	5 4 3 2 1
Considering factors which affect learning...................	5 4 3 2 1
Examining the student selection process.....................	5 4 3 2 1
Planning curricula..	5 4 3 2 1
Selecting instructional strategies..........................	5 4 3 2 1
Selecting and producing instructional media.................	5 4 3 2 1
Conducting administrative and coordination activities........	5 4 3 2 1
Evaluating instructional personnel..........................	5 4 3 2 1
Measuring and evaluating learning achievement...............	5 4 3 2 1
Using micro-teaching as a tool for improving instruction.....	5 4 3 2 1
Conducting short-term teacher education activities...........	5 4 3 2 1

Comments:

H.O.E. Institute, 1969

MODULE EVALUATION

As part of an effort to increase the effectiveness of future institutes similar to the present one, the institute planners would appreciate your reactions to the subject matter of this modular unit and its presentations. Your reactions will be confidential. In each case, draw a circle around the letter which represents your reactions as follows:

5 Extremely
4 Rather
3 Somewhat
2 Hardly
1 Not at all

Institute Modular Unit____

1. To what extent was the information presented new and informative?.. 5 4 3 2 1

2. To what extent do you expect to be able to use what has been presented in this modular unit?................. 5 4 3 2 1

3. Indicate the extent to which the presentations of the modular unit were stimulating............................ 5 4 3 2 1

4. Indicate the suitability of the instructional strategies (lecture, discussion, etc.) by which the topics were presented.. 5 4 3 2 1

5. Circle the number which best represents the degree to which the presentations were organized.................... 5 4 3 2 1

6. Indicate the degree to which the presentations were clear and to the point.................................. 5 4 3 2 1

7. Indicate the extent to which the speakers were enthusiastic about the topics presented.......................... 5 4 3 2 1

8. Indicate the degree to which you feel the guidelines were appropriate for this modular unit:

    A. Behavioral objectives................................ 5 4 3 2 1
    B. Annotated bibliography............................... 5 4 3 2 1
    C. Suggested instructional strategies................... 5 4 3 2 1
    D. Handout materials.................................... 5 4 3 2 1
    E. Assignment sheets.................................... 5 4 3 2 1

9. Indicate the extent, in general, to which you feel the stated behavioral objectives for this modular unit were achieved.. 5 4 3 2 1

10. If, in general, you feel that the stated behavioral objectives for this modular unit were successfully achieved, indicate the factors that contributed most to its success. Likewise, if you feel that the objectives were not successfully achieved, indicate the factors that contributed most to its failure.

____

____

____

____

____

ADDITIONAL COMMENTS:

STAFF INSTITUTE EVALUATION

This instrument has been prepared so that you can indicate how you feel about selected aspects of the institute. You are offered five possible answers to each statement. In each case, draw a circle around the letter which represents your own reactions as follows:

5 Exceptional
4 Very good
3 Good
2 Fair
1 Poor

1. Scheduling and Organizations:

A. Sufficiency of preplanning.................... 5 4 3 2 1
B. Smoothness of operation....................... 5 4 3 2 1
C. Adaptability to obstacles and feedback......... 5 4 3 2 1
D. Sensitivity to grievances..................... 5 4 3 2 1
E. Appropriateness of two week time period........ 5 4 3 2 1
F. Events sequenced appropriately................ 5 4 3 2 1
G. Time spent efficiently........................ 5 4 3 2 1
H. Conformity to schedule........................ 5 4 3 2 1
I. Balance between presentations and discussions.. 5 4 3 2 1
J. Quality of presentations...................... 5 4 3 2 1
K. Quality of discussions........................ 5 4 3 2 1
L. Sufficient time to pursue own activities....... 5 4 3 2 1
M. Informal interactions with participants........ 5 4 3 2 1

Comments:

2. Environment and Facilities:

A.	Class and meeting rooms......................	5	4	3	2	1
B.	Housing facilities...........................	5	4	3	2	1
C.	Teaching aids and equipment..................	5	4	3	2	1
D.	Resource materials, library..................	5	4	3	2	1
E.	Office and work space........................	5	4	3	2	1
F.	Eating facilities............................	5	4	3	2	1
G.	Recreational facilities......................	5	4	3	2	1

Comments:

3. Participants:

A.	Appropriateness of backgrounds................	5	4	3	2	1
B.	Willingness to work...........................	5	4	3	2	1
C.	Intellectual curiosity........................	5	4	3	2	1
D.	Concern for applicability of content..........	5	4	3	2	1
E.	Aspirations...................................	5	4	3	2	1
F.	Completion of assignments.....................	5	4	3	2	1

Comments:

4. Outcomes:

   A. Appropriateness of module guidelines:
      1. Behavioral objectives..................... 5 4 3 2 1
      2. Annotated bibliography.................... 5 4 3 2 1
      3. Suggested instructional strategies......... 5 4 3 2 1
      4. Handout materials......................... 5 4 3 2 1
      5. Assignment sheets......................... 5 4 3 2 1
   B. Achievement of modular objectives............. 5 4 3 2 1
   C. Personal objectives attained.................. 5 4 3 2 1
   D. Professional associations initiated........... 5 4 3 2 1
   E. Contributions of advisory committee........... 5 4 3 2 1
   F. Contribution to health occupations education... 5 4 3 2 1

   Comments:

5. In what ways, if any, did you as a staff member benefit personally as a result of your participation in this institute?

6. Excluding previous suggestions and criticisms, what additional recommendations can you make which would be of assistance in planning or conducting a future short-term institute?

H.O.E. Institute, 1969

APPENDIX F

INSTITUTE FOLLOW-UP ASSESSMENT QUESTIONNAIRE AND RESPONSES

HEALTH OCCUPATIONS EDUCATION TEACHER EDUCATION INSTITUTE

Participant Follow-Up Questionnaire

Name:____

Please use these pages to tell us what has happened to you and what you have done for others as a result of attending the Health Occupations Education Teacher Education Institute at the University of Iowa. The Institute does not need to be the only factor in your having behaved in this manner but it should have been a significant contributor.

The statements and questions are designed to stimulate your thinking. Don't be restricted by them. Please tell it like it is!

The overall objective of the Institute was the improvement of the teaching-learning process.

I would suggest that you look over all of the statements and questions before you begin to complete the questionnaire. Use the back of these sheets or additional pages if necessary.

I. Influence on Others.

What formally structured short-term teacher education activities have you conducted, or stimulated others to conduct? (Please be specific in terms of numbers and types of activities, content, number of participants, etc.)

What informal influence have you had on others? (Please be as specific as possible.)

II. Change in Approach to Your Role.

How are you different in your approach to such activities as planning, conducting and evaluating learning experiences?

What other benefits did you gain through the Institute experiences or the contacts you made which have helped in your position?

III. General

Has the Institute facilitated any past, present or future changes in your professional plans?

In what way?

Further education (Stimulated or influenced by the Institute)

Formal --

Courses

Degree Program

Informal --

Readings

Attendance at other workshops, etc.

Contact with other Institute participants.

Philosophy of education for the health careers.

IV. Other

What other things can you think of which could be attributed to the Institute?

HEALTH OCCUPATIONS EDUCATION TEACHER EDUCATION INSTITUTE

Participant Follow-Up Responses

I. Influence on Others.

A. What formally structured short-term teacher education activities have you conducted, or stimulated others to conduct? (Please be specific in terms of number and types of activities, content, number of participants, etc.)

Workshop for instructors in secondary schools.
Nurse aide/orderly program - 2 days - 16 participants.
Summer Conference Teacher Training Session, post-secondary - 4 days 32 participants.
Workshop for practical nursing instructors - 35 participants.
Staff workshop.
Assistant to director of a workshop and an institute.
Workshops for medical school and allied health personnel.
Conducted approximately 30 one or two-hour classes in methodology for in-service HOE trainers.
Two workshops, ½ day, for hospital instructors - 20-30 participants.
Three 2-hour sessions on Instructional Technology Nursing Faculty.
Guest speaker at 7 conferences for health professionals, spoke on "Instruction Methods."
Workshop - 1-day - for Health Occupations nurses, National Convention, on Health Teaching Techniques."
Shared in planning (and participating) of 2 statewide sessions for faculty in nursing programs.
Planned and conducted a 4-week summer session "Selection of Learning Experiences" - involved curriculum development and behavioral objectives.
Southeastern Rescue Seminar - 150 seasoned rescue aquamen participated. Ideas and methods from the Institute helped much in instructing the M.D. who taught the course.
Conference for in-service education directors - 2 day - 80 people. Used materials and ideas from the Institute.
Participated in numerous program development conferences.
Have instituted approximately 20 programs.
Statewide in-service program for dietitians. Will include curriculum planning, use of A.V. materials and sources of teaching aids.
Presently serving on RN program committee. Purpose is to provide chance for continuing education to A.A. or B.S. level.
Attempted to duplicate your course for our teachers.
Assisted faculty (nursing) through my role as consultant.

Taught continuing education course for RN's - adapted to their role of teaching patients and ancillary personnel.
Taught full-term class in Dental Assisting - 13 received certificates.
Workshop - 15 people, used educational objectives teaching methods, developed allied health materials.
Helped design HOE workshop.
Conference for all Health Occupations teachers in state - 100 people.
Conference, topic was behavioral objectives - 25.
Accreditations of P.N. programs conference - 65.
Curriculums in A.A. Nursing conference - 20.
Help plan and conduct 1-day activity for HOE people.
Help plan and conduct 2-week workshop for HOE people.
Help design course in "Instrumentation for Medical Technicians."
Arranged three different workshops dealing with communication skills; one will use programed teaching materials and one will be a "wet" workshop.
Designed course in Radiologic Tech. - 20 people.
Set up short and long range goals for technical education.
Help plan 2-week workshop - 14 people.
Helped design MA program in allied health - worked on the section called short-term institutes.
Planned short-term institute.
Two workshops for coordinators of PN programs:
  a. Curriculum plan and com. skills - 40 people.
  b. Writing behavioral objectives - 43 people.
Seven regional meetings for teachers in PN programs - 165 people.
Workshop for new HOE teachers - 30 people.
In-Service program for teachers and administrators of HOE - 35 people. Topic - writing behavioral objectives.
Teacher education workshop, Med. Techs - 1 week - 37 people - topics: behavioral objectives, evaluation, designing learning activities.
As direct result of the institute was elected chairman of delegation to design HOE workshop for teachers, 2-weeks - 17 people. Used video tapes and micro-teaching.
Conducted fall workshop for coordinators of PN programs. Topics were writing objectives, instructional planning, instructional media, tests and measuring, evaluation.
Assist in planning HOE workshop - 11 days.
Assist in planning 2-day workshop designed to give enough hours for licensure - 100 people.
Active as chairman of Council on Certificate and Associate Degree programs for ASAHP.
Assisted in faculty curriculum workshop - 8 people - topics: philosophy and objectives of school, curriculum, evaluation.
Conducted 5 two-hour courses based on the "Guidelines". Purpose was to encourage new teaching methods. 9 people. As result of

above programs, regional workshops are being planned for each of the specialties involved. I am acting as advisor to these groups.
Iowa institute provided impetus to form a regular on-going teacher training workshop by group called "Concerned 4." The idea has grown and now has financial support from Department of Voc. Ed.
Conference for 71 people which involved all areas of HOE plus MD's, health agencies, social workers, speech and occupational therapists, psychologists. Topic: Action and reaction in continuing health care.
Workshop for 84 nursing home personnel. Topic: Patients and their needs.
Institute for 50 selected executives from major patterns of health care. Topic: The patient in the health care circuit.
Weekly in-service education for HOE instructors - 8. Topics: Principles, procedures, methods, evaluation in relation to objectives.
As direct result of Iowa institute we initiated a series of in-service education sessions for HOE faculty - 15.
My report of Iowa institute had some influence on vocational education workshop (annual) - 300 people - devoted entirely to individualized instruction.
Teacher education courses for teachers in T&I and HO - 150 people.
Lead discussion at conference for vocational teachers on educational objectives and micro-teaching for HOE people.
In-Service program for HOE - 3 weeks - on methods of teaching, performance objectives, application of these two topics.
Indirectly had voice in planning an in-service course that travels from hospital to hospital.
Shared Iowa institute materials with Technical Institute and because of it (I think) they became interested in X-ray tech and are now offering an AA degree in that area.
Institute for teachers of diversified occupation (mentally retarded pupils). Topic: Laboratory projects in HO.
Two workshops - 10 people. Topics: Writing educational objectives and evaluation.
Stimulated PN faculty to attend institute very similar to yours, worked with our own faculty.
Workshop - 2 day - sponsored by state league of nursing. Topic: Cardiac Nursing, 143 RN's and LPN's.
Workshop for 70 HOE instructors. "Teaching Teachers How to Teach Reading."
Planned meeting of 35 group instructors to discuss learning activities of multi-media resources, developing behavioral objectives and improving curriculum.
Planned in-service education program to develop classroom strategies for individualized instruction and cognitive style learning.
Public schools drug evaluation seminar.

HOE workshop for instructors and coordinators - 109 people.

Teaching 60 Med. Techs (who also teach) how to set up objectives and ways of measuring learning.

Now coordinating a teacher education seminar as part of state society of rad. tech. - 50 instructors. Topic: Curriculum development and audio-visual materials.

HOE conference to promote articulation of HOE programs and encourage input of creative ideas through involvement - 197 teachers.

Workshop for PN faculty - to identify areas of need for future in-service programs - 30 faculty.

Secondary H.O. cluster curriculum workshop - 7 teachers.

Inter-mountain regional medical program.

Several workshops and seminars - concepts of behavioral teaching.

Now helping design a continuing education program (working with college). It will follow concepts in "Guidelines."

Two-day in-service for 20 HOE instructors.

One week conference for 50 HOE instructors.

Worked with regional medical program to plan continuing education for nurses.

Two-week session for new and old HOE staff. Topic: Inhalation therapy.

One week course for MD's who were teaching medical subjects to para-med students.

Workshop (1 day) at summer vocational conference - 30 teachers. Topic: Evaluation of PN programs.

Workshop (1 day) at annual vocational teachers' conference - evaluation of PN programs.

Stimulated similar workshops (as above) in two other cities.

Influenced program planners for state dietetic associate program. Topic: Effective teaching 240 dietitians. Program developed by state regional medical office.

Loaned materials to two directors of nursing programs. Materials returned with note. Unit was excellent.

Designed five local programs in program development for clinical faculty.

One Nat. program (AAIT) Educational Forum. Received excellent feedback.

None - but have future plans (answered this way by six people).

None - (answered this way by ten people).

B. What informal influence have you had on others? (Please be as specific as possible.)

Talked with fellow teachers about concepts used at the institute, (This answer given by 10 people).
Shared my institute ideas with fellow nurse. Educators who tend to look only at their specialty. They are now more open to need of all HOE educators to work together. (Answered by 3 people)
Used casual conversations to see the idea of continuing education for self-improvement to instructors. (Answered by 3 people).
Suggested books from bibliography to other teaching technologists.
Setting up area workshop at junior college.
May have stimulated a regional health career workshop at hospital.
Influenced teachers across state to be more aware of teacher-shortcomings and to strive for self-improvement.
Influenced HOE in the high school and also in development of new community college.
Influenced three or four older professors to reassess their methods and they are working on curriculum revisions which will ease upward and lateral mobility in health professions in my college.
Influenced better intragroup working relationships.
Participated in three local and regional HOE training conferences.
Serving as advisor in health occupations to local vocational-technical school.
Assisted respiratory therapy instructor in curriculum development.
Presented our philosophy and ideas to other institutions and training centers.
Assist local program personnel in program development and in new teacher orientation to HOE programs.
Had some influence in changing association meetings from boring lectures to practical workshops.
From my experience at the institute I was able to make a video tape on instrumentation.
Helped develop MA program. Used ideas from institute.
Worked with faculty on writing objectives and testing.
Assisted in training two new PN instructors.
Active in development of HOE workshop for tri-state area.
Now function better as an advisor and committee member.
Talked with national leaders in American Dietetic Association to influence them to develop a two year program for a Diet Therapy Technician.
Interview with Ken Skaggs, American Association of Junior Colleges.
Interview with Veronica Conly, HOE, Regional Medical Program.
Developed a packet of materials and presented the idea of a 2-year diet therapy and/or food service program to junior college presidents.
Talks with university medical center to develop teacher education programs.

Talked with many individual dietitians.
Loaned the institute materials to graduate students who are using them.
One is using Stern's matrix approach in curriculum development.
Informal discussions.
Discuss some aspects of learning with my faculty at each meeting.
Believe I stimulated my own faculty to do better job. The present class seems greatly improved over the previous class.
By various means I have made HOE people, educational administrators and others more aware of need for a comp. HOE educational program.
Currently promoting the granting of credits for seminars sponsored by state department of education.
Encouraging the American Society of Rad. Techs. to expand their range of seminars encompassing education at their national meeting.
Helped and guided instructors prepare teaching modules. (used taped sessions and micro experience analysis)
Some teaching technicians have sat in on my classes to observe my methods.
Zeroxed certain parts of "Guidelines" and shared with other groups:
   a. Teacher education at state college.
   b. Directors of nursing to stimulate faculty - also as a resource for faculty development.
   c. As resource for volunteer health agencies.
   d. Micro-teaching unit with school of nursing.
Introduced "ladder concept" at a college and it has since initiated something similar.
Enthusiasm of institute seemed to "rub-off" on associates.
Incorporated institute concepts into classroom programs.
Stimulated use of audio-visuals in medical survey nursing course at hospital.
HOE teachers here seem more receptive to new ideas, innovations.
Stimulated two hospitals and a university to work cooperatively on a medical technician program.
Stimulated faculty toward further academic improvement.
Use "Guidelines" as reference, especially helpful to teachers with no pedagogical background.
Organizing groups to create learning situations.
Work with new staff in planning courses and teaching methods.
Used institute materials in designing new course.
Assisted in preparation of manuals for accreditation check.
Assisted in preparation of materials for NEA visitation.
Urged improvement in writing behavioral objectives.
Unable to determine (answered this way by 10 people).
No response (answered this way by 11 people).

II. Change in Approach to Your Role.

A. How are you different in your approach to such activities as planning, conducting and evaluating learning experiences?

More concerned with evaluation and planning. (answered this way by 6 people).
Performance objectives are now much more a part of planning and evaluating. (answered this way by 5 people).
Better able to conduct short-term teacher education activities. (answered this way by 3 people).
More conscious of teaching methodologies. (answered this way by 3 people).
More secure in my teaching role. (answered this way by 3 people).
Can now present material to students in more understandable manner. (answered this way by 3 people).
Think and plan in terms of behavioral objectives. (answered this way by 3 people).
More concerned with getting students to evaluate their learning experiences.
Encourage more student questions.
Encourage more student self-direction.
Made extensive curriculum revisions.
Better able to delete unproductive material.
More consistent in specifying desired behavioral outcomes.
More versatility in teaching methods.
Now insist on core approach when approving curriculum change.
Now reducing the number of courses and reverting to cross utilization of existing courses between several occupations.
Now use behavioral objectives to evaluate learning experiences.
Now use behavioral objectives in evaluating clinical practice for nursing students.
Teaching planning has improved.
Not really different yet, but have a greater understanding of the value of such activities.
Experience with the video-tape has eased my tension when in front of students and I now feel more confident.
More cognizant of role of health specialist as a teacher.
More specific in planning courses, as well as each lecture.
More aware of student involvement.
Using more audio-visual aids.
Making better tests as result of using educational objectives.
Better able to discipline students - more stern in approach to behavioral problems.
Give more thought to how individuals learn.
Currently revising my entire curriculum.
Feel better-prepared to do my job.
More aware of base of common content needed by all in H.O.E.
Reorganizing programs and courses based on behavioral objectives.

More specific in evaluating clinical experiences.
Helping those under me write and evaluate educational objectives.
Including wider range of people in implementing programs.
Delegating assignments in specific areas to small groups with finalizing by total community.
Instruments of self-analysis or evaluation by instructors and students seems to be effective.
Better understanding of teacher-training needs in H.O.E.
Placing higher priority on teacher education activities, including broader exploration of financial resources.
Encouraging instructors conducting in-service education activities to utilize a multimedia approach.
Individualizing instruction to a higher degree.
Changed from lecture to "give and take" sessions.
Now use standard scores in evaluation.
Feel more confident and have taken leadership role in H.O.E. in the state.
Spending more time teaching the teachers.
Have explained the values of these activities to faculties of schools of practical nursing programs.
Re-evaluated my examinations.
Using new approaches when presenting teacher education materials.
More sensitive to the needs of those who conduct classes.
Have a firmer basis for planning.
Changed my thinking about new teacher orientation programs.
Work more diligently for the student, encourage the staff to show more compassion; now experimenting with "ways" to do this (mostly small groups).
Students are now asking doubtful questions without hesitating, gives me sense of accomplishment.
Modified and incorporated many ideas from the institute into the H.O.E. Teacher Education Institute.
Not sure.
No change. (answered this way by 4 people).
No response. (answered this way by 10 people).

B. What other benefits did you gain through the Institute experiences or the contacts you made which have helped you in your position?

Found out what is happening in other H.O.E. areas.
Contacts were very valuable - still correspond with some.
Contacts most important for interchange of ideas.
Contact with various disciplines within the health field was beneficial.
Stimulated me to attend other workshops, institutes, etc. (answered this way by 4 people).
Learned about other H.O.E. areas and realized problems are not unique to any particular group. (answered this way by 4 people).

Have implemented ideas shared by other institute participants in the same discipline into our own program. (answered this way by 4 people).
Sharing information with people of similar interests and goals was a tremendous benefit. (answered this way by 4 people).
Increased confidence in my ability to teach. (answered this way by 4 people).
Learned a lot about myself in regard to human behavior. (answered this way by 3 people).
Gained confidence in our approach to H.O.E. programs through comparative discussions. (answered this way by 3 people).
More receptive to change and more flexible. (answered this way by 3 people).
Gained broader understanding of health occupations field. (answered this way by 3 people).
Make better use of audio-visual materials now. (answered this way by 3 people).
Personal contacts across disciplinary lines added greatly to my resource information pool. (answered this way by 3 people).
Stimulated me to further my education. (answered this way by 3 people).
Still correspond with some of the participants, talk about curriculum and financial resources.
I found out that our medical professions are truly "allied" and we should strive to identify our commonalities and eliminate our duplications.
Developed a feeling of cooperation between people in the same field - used to be feelings of antagonism.
More aware of the problem of teacher-preparation in H.O.E.
Have identified the tremendous opportunities for teaching in this field to my students.
Awareness of other health occupations programs caused us to revise the core curriculum in our state.
Information on testing and scoring has proven helpful.
Reinforced my belief that teacher education is very similar for all vocational services.
Re-exposure to curriculum design methodology applied to the health professions.
Gained new knowledge and insight into the world of teacher-training.
Discovered perspective job candidates at institute.
Repeatedly use reference materials distributed at institute.
Interchange of ideas caused us to review and revise our program.
More conscious of need to acquire related knowledge.
More interest in education in general.
Stimulated to do survey of manpower needs, not by mail but by personal contact.
Very beneficial in helping me structure new allied health program.

Institute could have had influence in my being selected as a Dean.
Exposure.
Strengthened my philosophy about health careers mobility.
Now give more thought to personal mannerisms and environmental factors when teaching.
Stimulated to think of innovative new ways of teaching.
Have adopted, with some modifications, teaching techniques used at the institute; even "borrowed" some of Dr. Anderson's handouts and tales.
Good review of principles of teaching-learning process.
The "ACTION" group in H.O.E. was formed there and it has great potential.
Handouts made a variety of sources available for purchase of audio-visual materials.
Gained some new ideas and concepts, especially from the individual personnel.
Dr. Stern's personal assistance sharpened my abilities in developing objectives.
Background information has been used for similar meetings in our state.
Contacts stimulated me to further my future in my present health specialty.
Used Dr. Stern's matrix in preparing presentations.
Micro-teaching experience continues to be great asset since coming to the state office.
Better understand educational jargon.
Sharing of ideas across discipline lines helped me in my hospital consultation work in the area of proper utilization of all health workers in the delivery of patient care.
Personal contacts gave me many new slants on administrative operations.
Identified potential consultants during institute.
Established new channels of communication.
Became painfully aware of my lack of knowledge of education.
Became aware of need to coordinate health careers, rather than separating our fields.
Helped me to view myself in the role of teacher rather than nurse.
Being able to speak even a smattering of "pedagogese" has brought me new sources of assistance from local academicians.
Our vocational curricula is now being openly discussed by academicians rather than ignored.
More understanding of why we must continually change to update our curriculum.
Excellent leadership stimulated my thinking.
Gained new ideas for forming interest groups.
Clarified several fuzzy areas related to H.O.E.

The information sources have helped me.
Another participant was a great personal influence.
None. (answered this way by 3 people)
No response. (answered this way by 4 people)

III. General

A. Has the institute facilitated any past, present, or future changes in your professional plans?

Started back to school. (answered this way by 8 people)
Helped me decide to move to another position. (answered this way by 6 people)
Stimulated me to complete education at later date. (answered this way by 4 people)
Yes. (answered this way by 3 people)
Helped me achieve better direction for future planning. (answered this way by 3 people)
Now instituting workshops for H.O.E. people. (answered this way by 3 people.
Increased personal pressure to complete my doctorate.
Helped me make personal and occupational decisions.
To do better job in present position.
Help me to become better teacher.
Better able to help staff under me.
Plan to expand activities in H.O.E., rather than remaining attached to one occupation.
Watch education literature, especially method innovations, much more closely.
Stimulated me to change my graduate work from health professional to work in education.
Helped me evaluate my past experiences.
Reinforced my decision to provide on-going teacher education program for state.
Became committed to the ladder-curriculum approach (realized I needed more education to implement it - went back to school, completed MA.)
"We try harder".
Opened new possibilities in allied health.
Supportive role for more workshops and development of degree programs in H.O.E.
Will urge fellow staff to attend more workshops.
Helped me solidify plans for revising H.O.E. program.
Have different outlook on allied health.
Helped reinforce my interest in continuing education programs.
Have more confidence in my present role.
Prompted me to provide formal teacher-training for allied health instructors.

More positive attitude toward technical programs.
None specifically, perhaps indirectly or unknown.
No. (answered this way by 20 people)
No response. (answered this way by 6 people)

B. Further Education (Stimulated or influenced by the Institute)

1. Formal

Courses and Degree Program

Methods.
Instructional media.
Psychology of learning.
Philosophical foundation of education.
Psychology of childhood and adolescence.
Begin Ph.D. in health education, 1971
M.A. may become reality instead of a plan.
Completed M.A. (received Fellowship to begin Ph.D.)
Basic education course - M.A. in health occupations education.
Continuing education courses in medical technology.
Continuing Ph.D. in junior college administration, minor in health sciences.
Taking courses toward a degree.
Courses in radiology.
Have my Doctor of Science, now see that staff is more interested in advanced formal education, less on continuing education.
Working on M.A. in vocational education.
Continue to be hostile to "course and degree" approach.
Working on M.A. (educational administration)
Working on M.A. (public health)
Educational courses toward M.Ed.
Curriculum planning and methods.
Psychology of education.
Principles of vocational education.
Completed M.A. in teaching (18 hrs. in education, 15 in biology)
28 hours toward degree in Administration in Vocational Education.
Course in coronary care.
Will pursue formally credited courses this summer.
Working on Ph.D. in pathology.
Have encouraged others who are much younger than myself.
None. (answered this way by 17 people)
No response. (answered this way by 27 people)

2. Informal

a. Readings

Yes. (answered this way by 8 people)
Numerous. (answered this way by 7 people)

"Dateline '79. (answered this way by 3 people)
"Psychology of Learning Applied to Teaching" - Bugelski.
"Summerhill" - A.S. Neil.
"Learning" - Mednick.
"How Children Fail" - Holt.
"36 Children" - Kohl.
Articles on writing behavioral objectives.
Articles on teacher education.
Mostly from the bibliography of "Guidelines".
"Taxonomy of Educational Objectives" - Bloom.
Acquiring a resource center of both recruiting and curriculum materials for health occupations.
Nursing manuals.
Articles on how to improve teaching competencies.
Survey each month dozens of publications in the health area.
ANA Journal.
Journals and texts.
Review of institute notes and lectures.
Everything related I can get my hands on.
Journal of American Dietetic Association.
Papers from National Health Occupations Education Conference.
Papers from National Association of Schools of Allied Health Professions.
Materials which amplify or extend concepts learned at the institute.
School related.
Instructional technology.
"New Curricula" - Robert Health.
"AV Materials" - Wittich & Schuler.
Journals of AVA, ASAHP, and AMA.
Many, these are the greatest learning situations.
Micro-teaching.
B.F. Skinner.
R.F. Mager.
None.
No response.

b. Attendance at other workshops, etc.

New Orleans - National Health Occupations Education Conference. (answered this way by 16 people)
Yes. (answered this way by 6 people)
Attended Association of Schools of Allied Health Professions' Conference. (answered this way by 5 people)
No opportunity in our locale. (answered this way by 3 people)
State health occupations education workshop.
Workshops related to improving teaching competencies.
Regional health workshops.

Stroke - Cancer - Heart.
Emergency First Aid. 3-day workshop.
Geriatric workshop - 1-week.
"Teaching Teachers How to Teach Reading" workshop.
Drug abuse education workshop.
Public schools drug education seminar.
Education and Culturally Disadvantaged Young Adults: A New Approach to Effective Teaching and Understanding (AMIDS)
State Society of Radiologic Technologists, spring workshop.
American Society of Radiologic Technologists, annual conference.
Association of University Radiologic Technologists, annual conference.
Three in-state workshops.
Presented a public health workshop for food workers - the model of which is being adopted by a national food chain for in-service training programs.
Previously did not see need for practical nursing educators to attend AVA conferences - now I see it as a must.
Conference for effective teaching - interdisciplinary workshop for state regional medical program.
Successfully petitioned regional medical program to support workshops for allied health - 5 were held in past year, 2 more are planned.
Seek out every opportunity within state --- out-of-state workshops are nearly prohibited by tight budget.
Plan to encourage and send others.
In-service workshops for community educators: "Use of Satellites in Education".
Symposia on educational expenditures.
ASMT - Evaluation workshop.
Schooling has made attendance virtually impossible.
Personal development workshop at university business school.
Influence on attendance of workshops is questionable, but the institute did make me a better participant.
ASAHP.
Health occupations education seminars in state.
Have always promoted this; teachers now seem more stimulated to attend.
None available the past summer.
Attended state and national meetings of my Society.
Many state and local conferences.
AMA - Physician support.
Conference on post-secondary technical education.
Behavioral Science seminars.
Meetings at AVA.
None (to date). (answered this way by 7 people)
No response. (answered this way by 21 people)

C. Contact with other institute participants.

Yes. (answered this way by 26 people)
Yes, one other individual. (answered this way by 10 people)
Yes, worked with or corresponded with at least 10 individuals.
Yes, 4 individuals. (answered this way by 4 people)
Yes, participants from my own state. (answered this way by 4 people)
Exchanged letters with 2 or 3. (answered this way by 4 people)
See 2 occasionally. (answered this way by 3 people)
Minimal. (answered this way by 3 people)
Several, exchange curriculum and program materials.
A few, expect to see more at ASAHP in Chicago. The "Iowa Group" makes it their business to get together at conferences.
Contact with other participants on many occasions.
Considerable.
Yes, received curriculum materials from and worked with members of the institute at other workshops.
Had interview with Helen Powers.
Yes, 5 individuals.
Have written contact now and then. We generally tend to "clam up" at meetings with "institute" people.
Several others.
Yes, but informal, personal.
Contact with 20 people (did not know them before institute)
No. (answered this way by 7 people)
No response. (answered this way by 13 people)

D. Philosophy of education for the health careers.

Need for team-approach to health problems, a coordinated effort. (answered this way by 4 people)
Believe in core curriculum. (answered this way by 4 people)
Even more interested in the "ladder" concept, also in the core curriculum idea.
My own continues to develop and strengthen.
Health occupations is in a unique position to inaugurate new ideas in methods of teaching and that these new methods are a necessity if we are to be successful.
Need for interaction of all levels of health care (like the institute).
Need for technical level with accredited programs, certificates granted and national recognition.
The person doing the job has the right to be taught and the patient has the right to one who is taught.
Need more attention on specialties in health occupations education.
Proposal for current project includes training modules in various health occupations education areas in conjunction with community health testing sessions.

Believe in a coordinated approach to teacher education with distinct emphasis on formal programs to achieve this.

Help more people to achieve to the best of their ability.

Feel responsibility to plan, recruit and teach health occupations as a whole, not only my own specialty. I must work toward translating my concerns into concrete plans for meeting the demands of a good health care delivery system.

Leadership of health professionals must be brought into planning and conducting training courses and taught to use the assistant level health worker.

Institute reinforced philosophy of importance of the value, integrity of each individual in our society, especially in relationship to health careers.

My philosophy has changed. I see little to indicate that upward mobility is becoming a reality and find the occupations working against themselves and others by unduly restrictive licensure and certification.

Yes, concept of allied health profession and medical technology being part of it.

Need for modules of instruction based on a core, and to work with other instructors from other disciplines to define commonalities of subject matter.

Need for professionals to recognize philosophy of vocational education and to seek means to develop short-term programs geared to meet the needs of the student at the "assisting level".

To allow ambitious student to move up without starting all over again. We should include an education course in curriculum, such as in "core courses" of schools of allied health sciences.

Believe in the "ladder" concept. One college in state now allows challenge exams for LPN-AD-BS in nursing.

Educational institutions should assist with the responsibility of preparing people for careers in HOE specialties.

Need for expansion of new and revised programs for health careers other than nursing.

There is a place for almost everyone in health occupations. Ours is an ever-changing field -- there is always a better or faster method in the field of medicine. I feel a greater responsibility for teaching medical technology than ever before.

The content of health-related programs should provide meaningful and professional needs. It should also provide lateral and vertical mobility.

Believe I am developing a more democratic approach, i.e., becoming occupational-training oriented rather than L.A. oriented.

Training for both medical and para-medical students can be shortened (use new techniques). Only workable solution to medical shortage is to use para-medical personnel to their fullest ability.

Need for education and continuing education of all health occupations education instructors.

Advocate the "Spin-off" approach.

Essential to carefully evaluate and establish a "need" for preparing people for certain positions.

My greatest concern is the number of health workers being prepared to assist other health workers (or supervise them) and yet the two groups are not working together. Health care services will continue to suffer until we learn to do this.

Health careers should be headquartered in centers of higher education and/or continuing education.

Modifications of ideas due to contacts with people from other areas.

A many-faceted person can be molded and then encouraged to follow his particular specialty.

Down with terminal programs and up with mobility! Let us never forget the "self-destruct" philosophy.

Helped me get a perspective of problem areas.

My philosophy is very close to that revealed in the institute.

As the utilization of para-professions becomes increasingly more necessary, the importance of lattice programs becomes vital. We promote additional training in data processing, medical illustration, etc.

Goal is still to provide better patient care thru qualified personnel. To reach this goal we should equip the student with a basic technical knowledge in his specialty, but above all it should provide adaptability (for new methods and equipment) and flexibility (in case field becomes obsolte) and mobility.

Not clear-cut, nor as pertinent as methods and techniques.

None.

No change in my philosophy. (answered this way by 6 people)

No response. (answered this way by 23 people)

IV. Other.

What other things can you think of which could be attributed to the institute?

Willingness of participants to share knowledge and knowhow impressed me. (answered this way by 4 people)

Appreciate the utter dedication of those involved in preparing the institute. (answered this way by 4 people)

Became more knowledgeable of activities in other states. (answered this way by 4 people)

Warm, personal relationships which developed there. (answered this way by 3 people)

Stimulated intellectual and personal growth. (answered this way by 3 people)

Availability of "learned" individuals to question, probe and listen to. (answered this way by 3 people)

Became very aware of the "ingredients" for conducting a successful institute; magnificient performance!

Thanks for an outstanding program.

It has accentuated the diversification of para-medical vocation, and is attempting to bridge that gap.

It served as a catalyst in the continuation of teacher-learning enrichment.

Enlightenment of other consultants in my department, relative to health occupations.

It caused a specific attitudinal change. Being a nurse, I "grew up" with state boards and licensure. I resisted the growth of all these ancillary groups (inhalation therapists, etc.) but I now see both sides of the coin.

Some understanding of micro-teaching.

The institute has directly caused a re-orientation of my college. The Board of Regents (July-70) approved the initiation of the "College of Allied Health Professions."

Development of regional health conference for 8 western states grew out of the institute. The first of these series will be a 3-day workshop in November, 1970 and will focus on concepts found in the "Guidelines."

Have since made better use of visual aids.

Created a desire to improve my self-appearance and presentations to class and public.

Further motivated me to develop a plan for the displaying of financial and human resources toward the development of a comprehensive health occupations education teacher-education program for state.

Nearly everyone identified the void in lateral and vertical mobility and the need to correct this problem.

A good feeling about health careers.

Recognized benefits of group productivity versus isolated, individual efforts.

Indirectly helped me to get a job with AMA.

Gained acceptance of continually changing programs, mutual projects across state lines.

Institute left me with feeling of unrest and this prodded me to set additional objectives for my program and myself.

Recognize need and utilize audio-visual materials.

Rewarding, interesting and delightful two weeks.

Realized importance of team approach to health problems.

Was motivated to assist in bringing together all health occupations education people in the state.

Have given greater effort to work with teacher-training staff of university - responsible for providing selected courses for teachers out in the state on extension basis. So far these courses tend to be neglected by nursing faculty - seen as of minimal value.

Strengthened belief in dedication of a number of educators who are fighting (uphill) to bring reason and order to the education and training of all health workers.

Questionnaire should be used (more specific) with application to the institute.

Provided me greater professional reach.

Greater appreciation for vocational education.

General broadening of my knowledge.

Necessity for education of health careers teachers.

The feeling that I have just begun to utilize the abundantly rich materials received through the institute.

State dietetic association representative to state health careers council.

Proposal to state regional medical program for continuing education for dietitians (to include teaching techniques).

Program for dietitians in state on trends in health occupations and education technique.

Secured workshop on "Effective Teaching" from state regional medical program for state meeting of dietitians.

Am chairing a college-wide inservice education program designed for all faculty. Am also writing a faculty newsletter for the college now.

Stimulus toward improving allied health training generally.

Valuable exposure (apparently the first exposure for many) to teaching-learning concepts.

Better understanding of the problems that today's students face, especially underprivileged groups.

Realized need for formal programs.

Meeting and knowing wonderful, successful people on both professional and social basis.

Exposure to most competent approaches to health occupations education.

We have used much from the institute in developing in-service teacher education activities and plan to continue this for all health occupations education teachers.

Appreciate the wide range of health careers represented.

None. (answered this way by 6 people)

No response. (answered this way by 23 people)

APPENDIX G

EXAMPLES OF LETTERS RECEIVED FOLLOWING THE INSTITUTE

SEP 7 Rec'd

the University of Alabama in Birmingham / 619 SOUTH NINETEENTH STREET / BIRMINGHAM, ALABAMA 35233
the Medical Center / UNIVERSITY OF ALABAMA HOSPITALS AND CLINICS

September 3, 1969

Dr. Lewis D. Holloway
Assistant Professor
College of Medicine
University of Iowa
135 Melrose Avenue
Iowa City, Iowa 52240

Dear Lew:

The Teacher Education Institute just concluded was one of the most stimulating I've ever attended. And, as you may not know, I speak from no little experience--we put on some 10-15 workshops per year. I arrived back in Birmingham exhausted! Thank you for the opportunity to participate.

From the audience participation in the "welcome" to the last group's remark that they'd like to stay another two weeks I guess you have some idea of the enthusiasm generated. I credit this to the OUTSTANDING STAFF you recruited. Congratulations!

Naturally, I enjoyed some parts more than others. The contacts among us in the clinical laboratory field will be quite valuable to me and the overview possible through interaction with the other areas of the health field are both important highlights. Incidentally, the Medical Technology group from Iowa State (Carol Glich and Lois Herpst, etc.) was most cordial. The medical technologist workshop participants took advantage of seeing and discussing their education program thru their hospitality on Monday night.

Keep up the good work. I look forward to hearing more from you. Best regards to Nanc and Ed English.

Sincerely yours,

Pat

(Miss) Patricia Ann Amos, M.T.(ASCP)
Educational Director
Schools of Laboratory Sciences

PAA:ab

THE UNIVERSITY OF IOWA
IOWA CITY, IOWA 52240

University Hospital
Area 319: 338-0525

School of Medical Technology
202 Concourse
University of Iowa Hospitals
September 4, 1969

Dr. Lewis D. Holloway
Director
Health Occupations Education Institute
Program in Health Occupations Education
135 Melrose Avenue
Iowa City, Iowa 52240

Dear Dr. Holloway:

I'd like to thank you for the opportunity of attending some of the H.O.E. Institute meetings. The few sessions that I was able to attend were very informative and helpful. A couple of concepts were presented that particularly aroused my interest and I plan to utilize them in my educational research for my dissertation.

One of the highlights for me was the friendliness of the participants, both the lecturers and students. The congenial atomsphere led to an exchange of ideas and contacts with individuals thougout the country with the same concerns and which I know will be of value to me in the future.

Again, thank you for the invitation to participate in your H.O.E. Institute.

Sincerely,
Carol Gleich
(Miss) Carol Gleich, MT(ASCP)

CG/sl

SEP 12 RECD

KAPIOLANI COMMUNITY COLLEGE

Community College System - University of Hawaii

September 8, 1969

Dr. Lewis D. Holloway, Director
Program in Health Occupations Education
The University of Iowa
Iowa City, Iowa 52240

Dear Dr. Holloway

It was a privilege for me to attend the Health Occupations Education Teacher Education Institute for two weeks in August. The Institute was so well planned and organized that I gained a great deal by going through the Institute process itself. The Institute structure and activities will be applicable to similar teacher education conferences in Hawaii.

I appreciate the various printed materials which I shall review again and share with my colleagues. The friendships and professional contacts developed will continue long after the conclusion of the Institute through the sharing of mutual problems by correspondence.

I have a clearer perspective of my faculty development responsibilities. Thank you.

Sincerely

Harriet Nakamoto

Harriet Nakamoto
Dean of Instruction

cls

620 Pensacola Street · Honolulu, Hawaii 96814 · Telephone: 514-654

APPENDIX H

"GUIDELINES" PUBLICATION FOLLOW-UP QUESTIONNAIRE

GUIDELINES AND SUPPORTIVE PAPERS FOR PLANNING AND
CONDUCTING SHORT-TERM TEACHER EDUCATION ACTIVITIES

QUESTIONNAIRE

I. We would appreciate your completing the following to help us with our record keeping and as feedback for evaluating this publication. No mention of individuals will be made in the analysis or any reports on this study.

Name:____

Position:____

General Duties & Responsibilities__________________

____

____

Name of Institution:_______________________________

II. Have you made use of this publication? Yes ___ No ___

If No, please indicate why and return the questionnaire. Thank you.

Not appropriate to your use	______
Insufficient time available	______
Materials included not helpful	______
Other (please specify)	______

If Yes, please complete the remaining portion of the questionnaire.

III. In what way(s) did you use the publication?

1. To improve your teaching.	______
2. To improve the teaching of others.	______
3. Other (please specify).	______

Please describe how the publication was used to accomplish 1, 2, and/or 3 above.

IV. Which of the following roles would you say this publication has served? Check more than one if appropriate.

1. As a resource for self-improvement--read or studied as a total package. ______
2. As a resource for self-improvement--selected items of interest. ______
3. As the basic stimulant to planning and conducting short-term activities for improving the teaching of others. ______
4. As a supplement to planned activities--not stimulated by the publication. ______
5. Other (please specify). ______

V. Please rate each of the six modular units on the five-point scale by circling that rating which you believe is most appropriate. This rating should be based on how well these units met your needs. Please make any comments you feel are appropriate.

	Excellent				Poor
Unit 1--Supportive Personnel in the Changing Health Industry	5	4	3	2	1
Unit 2--Defining and Describing the Educational Product.	5	4	3	2	1
Unit 3--The Learner and Learning.	5	4	3	2	1
Unit 4--Designing Learning Programs.	5	4	3	2	1
Unit 5--Evaluation in the Educational Process.	5	4	3	2	1
Unit 6--The Educational Process	5	4	3	2	1

Comments:

VI. Please rate the specific parts of the publication with respect to how well they met your needs. Please comment, as you believe appropriate, on these portions of the guidelines. We are particularly interested in the use made of these various portions of the document.

	Excellent				Poor
Educational Objectives	5	4	3	2	1
Instructional Strategies	5	4	3	2	1
Annotated Bibliographies	5	4	3	2	1
Supplementary Materials	5	4	3	2	1
Supportive Papers	5	4	3	2	1

Comments:

VII. What other materials should be included in publications of this type?

VIII. Do you have any suggestions on improving the form or construction of the publicaton?

IX. To what extent were these materials used to benefit individuals in the health field? (Check one only)

None_____ Somewhat_____ Primarily_____ Entirely_____

If health personnel were involved, generally what were their specialties and levels of preparation?

If individuals other than health and health related personnel were involved, who were they?

X. Please estimate how many teachers have been influenced by your having received a copy of this publication? (More than through a passing comment, but you need not have held formal lessons to influence others.)

XI. Please describe any future plans in which you expect to use this publication.

Thank you.

APPENDIX I

IN-SERVICE PROGRAM INTEREST SURVEY AND OBJECTIVES

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Suggested Modular Units For
Health Occupations Short-Term
Teacher Education Activities

Directions: Rank these topics from 1-13 in terms of their value for in-service teacher education for you and your staff.

1. Supportive Personnel in the Changing Health Industry.

_____ 1.1 Utilization and preparation of personnel.

_____ 1.2 State of affairs in health occupations education at the vocational and technical levels.

_____ 1.3 The role of the health specialist as a teacher.

2. The Learner and Learning.

_____ 2.1 Factors and concepts affecting learning

_____ 2.2 Selecting students.

3. Designing Learning Programs.

_____ 3.1 Planning Curricula.

_____ 3.1.1 Conceptual models to analyze occupations.

_____ 3.1.2 The educational product described in behavioral terms.

_____ 3.1.3 Selecting, organizing and sequencing content.

_____ 3.2 Selecting and using instructional strategies.

_____ 3.3 Selecting and producing instructional media.

_____ 3.4 Conducting administrative and coordination activities.

4. Evaluation in the Educational Process.

_____ 4.1 Evaluating instructional personnel.

_____ 4.2 Measuring and evaluating learning achievement.

IN-SERVICE TEACHER EDUCATION COURSE

Educational Objectives
(General)

5.01 The participant will apply the basic principles of achievement testing.

- 5.01.01 Describes the purposes for measuring achievement.
- 5.01.02 Recognizes preparatory procedures essential to the development of valid achievement tests.
  - 5.01.02.01 Utilizes educational objectives as the basis for developing tests.
  - 5.01.02.02 Plans a distribution of test items which will proportionately sample the educational objectives.
  - 5.01.02.03 Selects achievement tests appropriate for the particular use they serve.
  - 5.01.02.04 Selects types of test items which are appropriate for measuring the kinds of learning outcomes desired.
- 5.01.03 Develops achievement tests.
  - 5.01.03.01 Recognizes desirable characteristics.
  - 5.01.03.02 Designs objective, essay and performance tests.
- 5.01.04 Recognizes appropriate steps for assembling and administering tests.
- 5.01.05 Recognizes suitable techniques for scoring tests and appraising test items.
- 5.01.06 Employs appropriate methods of treating test scores and assigning grades.
  - 5.01.06.01 Describes test scores in terms of selected mathematical statistics.
  - 5.01.06.02 Utilizes standard scores and percentiles.
  - 5.01.06.03 Converts test scores to grades.
  - 5.01.06.04 Compiles grades or scores to produce a composite.

APPENDIX J

IN-SERVICE PROGRAM LESSONS
AND
EXAMPLES OF INSTRUCTIONAL MATERIALS

IN-SERVICE TEACHER EDUCATION COURSE

LESSONS

Lesson	Subject	Strategy
0	Orientation and Registration	General Presentation
1	Introduction - Pre-Test	General Presentation
2	Purposes for Measuring Achiev.	Tutorial Package
3	Preparatory Procedures	Tutorial Package
4	Preparatory Procedures	One-to-one
5	Writing Test Items	General Presentation
6	Writing Test Items	Tutorial Package
7	Writing Test Items	Self-Directed Package
8	Writing Test Items	One-to-one
9	Assembling & Admin. Tests	Tutorial Package
10	Mid-Term	"Test" & Discussion
11	Scoring Tests	Self-Directed Package
12	Appraising Tests	General Presentation
13	Mathematical Stat. in Testing	Tutorial Package
14	Standard Scores & Percentiles	General Presentation
15	Test Scores to Grades	Tutorial Package
16	Final Experience - Post-Test	Test-Opinionnaire, Discussion

(Example of the Worksheets for a General Presentation)

5.01 Measuring and Evaluating Learning Achievement

I. LESSON 12

Appraising Test Items

II. OBJECTIVES

5.01.05.02 Examines techniques for appraising test items.

- A. Discusses the value of conducting an item analysis.
- B. Conducts item analysis.
    - 1. Analyzes multiple-choice items.
        - a. Estimates item difficulty.
        - b. Estimates item discrimination power
        - c. Determines distracter effectiveness
    - 2. Analyzes true-false items.
    - 3. Analyzes matching items.
    - 4. Analyzes short-answer items.
    - 5. Analyzes essay test items.

III. EQUIPMENT AND MATERIALS

Presentation Outline

Visuals

Chalkboard

IV. TEXTS AND REFERENCES

Gronlund, N.E. Constructing Achievement Tests. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1968.

Gronlund, N.E. Measurement and Evaluation in Teaching. New York: The Macmillan Co., 1965.

Lathrop, R.L. Bulletin on Classroom Testing, No. 10, Bureau of Institutional Research, University of Minnesota, 1959.

V. TIME - 50 minutes

VI. PRESENTATION

A. Introductory remarks

B. Objectives for Lesson 12

C. Why do an item analysis?

1. Specific test improvement

a.

b.

(1)

(2)

(3)

2. Other values

a.

b.

c.

d.

(Example of the Visuals for A General Presentation)

Visual 5.01 - 12.1

Item Analysis
Multiple-Choice

Course Nurse Aide Dates used ______________

Content Diseases ______________

Outcome Knowledge ______________

ITEM

Which of the following diseases may be contracted from water that is polluted with sewage?

A Dysentery

B Typhoid Fever

C Typhus Fever

D Heart Disease

ITEM ANALYSIS DATA

Alternatives	A	[B]	C	D	Omits
Upper 12	3	8	1	0	0
Lower 12	1	5	6	0	0

Difficulty______________ Discriminating Power____________

Comment:

[] Correct Answer

(Example of the Worksheets for an Audio-Tutorial Lesson)

Lesson 13. Mathematical Statistics in Testing

LISTEN

Review Lesson 12

READ

Objectives: Lesson 13 Visual 5.01 - 13.1

LISTEN

Comments on objectives for this lesson.

READ

Text, pages 91-92.

Introduction to "Simplified Methods of Treating Test Scores".

LISTEN

Statistical measures used in testing.

ANSWER

Question 12 - Response Card Correct answer is T.

The most frequently occuring score in a set of scores is the

a. central tendency

b. mode

c. mean

d. median

LISTEN

Previous question

(Example of the Worksheets for a Text-Type Tutorial Lesson)

Lesson 13: Mathematical Statistics and Test Construction

Lesson 12 dealt with the desirability of appraising classroom tests. It was pointed out that test appraisal offered benefits in improving future tests and in improving the learning experiences of students. Item analysis procedures were emphasized as a means of improving tests and we went into how these techniques are accomplished.

READ

Objectives: Lesson 13 Visual 5.01 - 13.1

This lesson deals with a number of statistical computations and their use. For some of you these terms may be new. We have tried to limit this activity to consideration of only those statistics which are of particular use to us in test construction. Also, we have made an effort not to explore them any deeper than is really necessary for use by classroom teachers. Should you be interested in examining this subject further, you will find that some are gone into in greater depth in the textbook and there are numerous statistics books for this purpose. Some of these are listed as references in your text.

Our first concern is that you become familiar with the general areas and the terminology which is appropriate for those statistics which prove useful in handling the results of classroom tests. Let us first stress measures of central tendency. No matter what system of scoring used, it is beneficial to have some idea of where the "average" of your group lies. For measures of central tendency, there are three terms which must be described. First, the mean, which is the arithmetic average. This is computed by adding all the scores and dividing by the total number of scores. Most all of you are familiar with computing a mean, whether you have referred to it by that term or not.

A second measure of central tendency is the median. This measure is used in statistical analysis when there are small groups and groups which do not approach the normal distribution, i.e., a bell-shaped curve. The median is simply the center-most score when you order the test scores from high to low, or low to high.

How do the scores distribute themselves around this measure of central tendency? What is our degree of variability? For this, we have statistics which are referred to as measures of variability.

There are several commonly used measures of variability. One is the range. This is simply the interval between the highest and lowest scores. Another measure of variability, or spread, is the standard deviation. Mathematically, it is defined as the root mean square of the deviations from the mean. For our purposes, it is a standardized measure of variability or deviation. Other measures of variability not included in this lesson are the quartile deviation and the average deviation.

READ

Text, pages 91-92.

Introduction to "Simplified Methods of Treating Test Scores"

ANSWER

Question 12 - Response Card Correct answer is T.

The most frequently occurring score in a set of scores is the

a. central tendency

b. mode

c. mean

d. median

(Example of the Visuals for an Audio or Text-Type Tutorial Lesson)

Visual 5.01 - 13.1

Objectives -- Lesson 13

5.01.06 The participant will apply appropriate methods of treating test scores and assigning grades.

- 5.01.06.01 Describes test scores in terms of selected mathematical statistics
    - A. Utilizes measures of central tendency.
        - 1. Examines the mean as a measure of central tendency.
            - a. Discusses the use of means.
            - b. Computes means.
        - 2. Examines the median as a measure of central tendency.
            - a. Discusses the use of medians.
            - b. Computes medians.
        - 3. Examines the mode as a measure of central tendency.
            - a. Discusses the use of modes.
            - b. Computes modes.
    - B. Utilizes measures of variability.
        - 1. Examines the standard deviation as a measure of variability.
            - a. Discusses the use of standard deviations.
            - b. Computes standard deviations.
        - 2. Examines the range as a measure of variability.
            - a. Discusses the use of ranges.
            - b. Computes ranges.
    - C. Recognizes measures of test reliability
        - 1. Examines the reliability coefficient.
        - 2. Examines the standard error of measurement.

Visual 5.01 - 13.1

SAMPLE TEST SCORES

Test scores for 16 students, n = 16
Number of items in the test = 40

36
35
33
33
29
29
29
27
26
26
24
24
23
20
20
18

Mdn =

R =

M =

SD =

Mo =

Reliability =

SE_m =

(Example of the Worksheets for A Self-Directed Lesson)

Lesson 7. Essay and Performance Tests

Introduction

We have used a variety of instructional strategies in this course. You have been the most important part of each of them. For this lesson you will have the responsibility for doing it all. We have great faith in your ability to learn on your own; for after all, learning is a personal thing. A teacher may facilitate learning, but you must learn for yourself. Hopefully, we can facilitate your learning this lesson by what we say and the materials provided.

Obviously this self-instruction form will not work equally well for everyone. Your degree of success will depend a great deal on your motivation. So, are you all "psyched up" for this lesson? I hope so. I hope the experiences of this lesson will be of some help to you in preparing essay and performance tests.

We could outline a procedure or plan for you to follow, but this does not seem appropriate. You will have the objectives which we feel you should achieve, reading materials and visuals, and some criteria for ascertaining whether you have achieved the objectives. From your knowledge of how we have used these types of materials in the other lessons, and more importantly, your knowledge of the kinds of things which help you learn, we feel you will do well.

Essay Tests

Note: Scoring Essay Tests will be covered in a later lesson.

Objectives:

See Visual 5.01 - 5.1 Objective 5.01.03.02 B.

Materials:

Text: Constructing Achievement Tests, Gronlund, pp. 65-75.
Visual 5.01 - 7.1
Visual 5.01 - 7.2

Criteria:

Following completion of your learning activities you should be able to do the specific activities described in the objectives. To assess your abilities you may wish to write out a self-test over the objectives or work with another student and orally discuss the objectives.

(Example of the Visuals for a Self-Directed Lesson)

Visual 5.01 - 7.1

ESSAY TESTS

Purpose:

Advantages:

Limitations:

Types of Essay Questions:

Visual 5.01 - 7.2

Suggestions for Constructing Essay Questions

1. Use essay questions to measure complex learning outcomes only.

2. Relate the questions as directly as possible to the learning outcomes being measured.

3. Formulate questions which present a clear, definite task to the student.

4. Do not permit students a choice of questions unless the learning outcome requires it.

5. Provide ample time for answering and give suggested time limits for each question.

MEMO

TO: Lewis D. Holloway, Assistant Professor
Health Occupations Education
The University of Iowa
135 Melrose Avenue
Iowa City, Iowa 52240

Office Telephone
(319) 353-3536

FROM: ______________________________
____
____
____

DATE: ______________

SUBJECT: In-Service Teacher Education

Unit ____________ Lesson ____________

Questions,
Comments,
Suggestions,
Concerns,
Etc.

APPENDIX K

IN-SERVICE PROGRAM OPINIONNAIRE
AND
EVALUATION INSTRUMENTS

IN-SERVICE COURSE
OPINIONNAIRE AND EVALUATION INSTRUMENT

____
Name

Your name is requested for administrative purposes only. It will not appear in the analysis and your responses will not affect your grade in the course or the attitude of the instructional staff. We want your true feelings as a means to assist us in evaluating this activity.

This instrument has been prepared so that you can indicate how you feel about selected aspects of this course. You will agree with some statements and disagree with others. You are offered five possible answers to each statement. In each case, draw a circle around the letter which represents your own reaction as follows:

SA if you strongly agree with the statement
A if you agree but not strongly so
N if you are neutral or undecided
D if you disagree but not strongly so
SD if you strongly disagree with the statement

Remember, the only correct answer is the one which actually represents how you feel about each statement. The "neutral or undecided" answer should be circled only when you have no opinion.

1. I would have preferred to have had only "live" lessons.. SA A N D SD
2. Nine weeks was too short a period in which to learn the content of this course.. .... SA A N D SD
3. The packaged lessons were easy to work with...... SA A N D SD
4. I would have preferred to have had evening meetings rather than to have been so rushed.......... SA A N D SD
5. Topics were scheduled in an appropriate sequence. SA A N D SD
6. A greater proportion of time should have been spent in general presentations.................. SA A N D SD
7. The instructional staff was too inaccessible for individual attention............................ SA A N D SD
8. In general, the program was well organized....... SA A N D SD
9. A greater proportion of time should have been spent in one-to-one sessions.................... SA A N D SD

10. I think inadequate provisions were made for individual differences.......................... SA A N D SD

11. I learned very little from this activity........ SA A N D SD

12. For a better balance between live and packaged lessons there should have been more packaged lessons.. SA A N D SD

13. I would take the opportunity to participate in an activity of this nature again if it were offered.. SA A N D SD

14. General presentations were too long to sit and listen or to take notes......................... SA A N D SD

15. The course content presupposed far more training than I had....................................... SA A N D SD

16. The lessons were stimulating and interesting.... SA A N D SD

17. I was satisfied with the topic chosen for this in-service training project..................... SA A N D SD

18. The presenters were well prepared............... SA A N D SD

19. I expect to be able to apply the content which was presented in this course..................... SA A N D SD

20. The information presented was too elementary.... SA A N D SD

21. I was stimulated to think objectively about the topics presented............................ SA A N D SD

22. Too much jargon was used in the lessons......... SA A N D SD

23. Too much emphasis was placed on topics that are unimportant.............................. SA A N D SD

24. The presentation of the content material was paced too fast................................. SA A N D SD

25. I was pleased with the teaching methods used for the course.............................. SA A N D SD

For each of the following topic areas, circle the number that best indicates the extent to which you are now familiar with the topics which were covered, as follows:

5 Very familiar
4 Rather familiar
3 Somewhat familiar
2 Hardly familiar
1 Not at all familiar

1. The purposes for measuring achievement.............. 5 4 3 2 1
2. Preparatory procedures for developing tests......... 5 4 3 2 1
3. Writing test items.................................. 5 4 3 2 1
4. Assembling and administering tests.................. 5 4 3 2 1
5. Scoring and appraising test items................... 5 4 3 2 1
6. Treating test scores and assigning grades........... 5 4 3 2 1

Is there any topic or specific lesson on which you would like to give us additional feedback, either positive or negative?

Several instructional formats were used for this course. Please indicate how effective you feel each of these formats was in presenting the material. Circle the appropriate number.

5 Very effective
4 Rather effective
3 Somewhat effective
2 Hardly effective
1 Not at all effective

1. General presentations.................................. 5 4 3 2 1
2. Packaged presentations with tapes.................. 5 4 3 2 1
3. Packaged presentations without tapes................ 5 4 3 2 1
4. One-to-one discussions................................ 5 4 3 2 1
5. Group discussions..................................... 5 4 3 2 1

Is there any additional feedback you would like to give us regarding the various instructional formats which were used in this course?

Are there any other comments which you would like to make which might help us in evaluating this course? We need to know what was good and also what could be improved so that in offering this course again, or in preparing other such activities, they can best meet the needs of the participants.

AUDIO-TUTORIAL AND TEXT-TYPE TUTORIAL PACKAGES

This was the first time we have used the text-type tutorial packages. We wish to assess to what extent they were used, and how they were received.

Please check (✓) which of the formats you used for the lessons specified.

Lesson No.	Subject	Audio	Text	Both	Neither
2	Purposes				
3	Preparatory Procedures				
6	Writing Items				
9	Assemb. & Admin.				
13	Math. Statistics				
15	Grading				

Please state why you chose a particular format or combination of formats.

Can you suggest any specific ways in which we might improve the text-type tutorial packages?